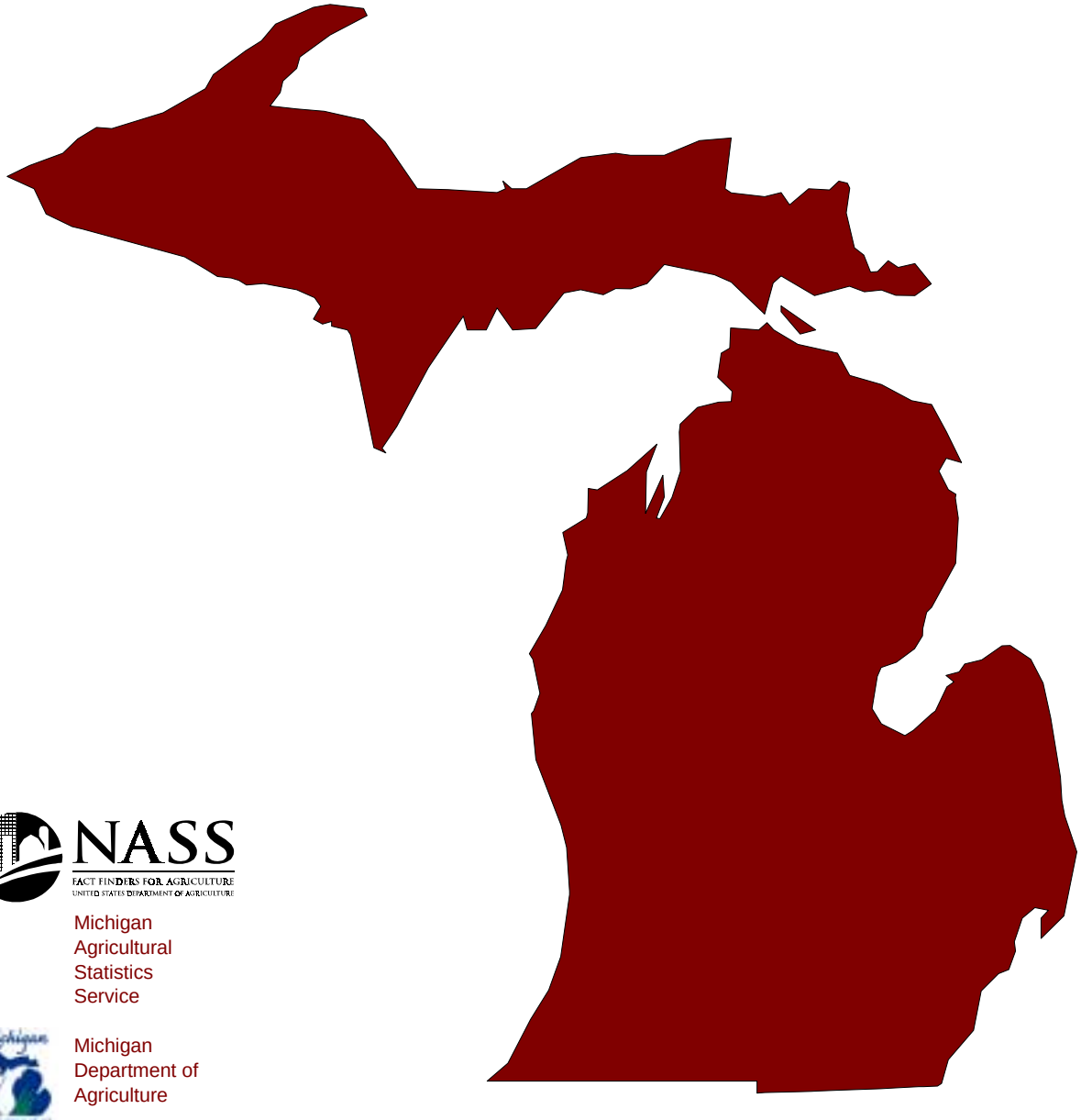
# Michigan Agricultural Statistics 2001-2002



NASS
FACT FINDERS FOR AGRICULTURE
UNITED STATES DEPARTMENT OF AGRICULTURE

Michigan
Agricultural
Statistics
Service

Michigan
Department of
Agriculture

## Michigan Department Of Agriculture 2001 Annual Report

This bulletin is provided free to Michigan farmers and reporting agribusiness firms. Others may obtain copies at $5.00 each. Please make checks payable to USDA-NASS and send with your request to P.O. Box 26248, Lansing, MI 48909-6248.

PRINTED BY AUTHORITY OF PUBLIC ACT 380 OF 1965, AS AMENDED
TOTAL NUMBER OF COPIES PRINTED: 7,000 TOTAL COST: $14,741.29 COST PER COPY: $2.11

# Michigan Agricultural Statistics 2001-2002

**Michigan Agricultural Statistics Service**

David D. Kleweno - State Statistician
Vince Matthews - Deputy State Statistician


Issued cooperatively by:

Michigan Department of Agriculture
Executive Office
Dan Wyant, Director

United States Department of Agriculture
National Agricultural Statistics Service
Ron Bosecker, Administrator

JOHN ENGLER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF AGRICULTURE
LANSING

DAN WYANT
DIRECTOR

September 2002

The 2001 Michigan Department of Agriculture Annual Report is a record of the year's accomplishments and initiatives, and lay the foundation for issues that will be important to our state's food and agriculture industry in the future. This report, combined with the 2001-2002 edition of Michigan Agricultural Statistics, outlines the important facets of Michigan agriculture, our state's second-largest industry.

In 2001, the department's top priorities continued to be:

- Food safety and security;
- Environmental stewardship;
- Animal and plant health and protection;
- A viable agriculture economy, and;
- Consumer protection.

The Michigan Department of Agriculture, created in 1921, has faced many challenges throughout the years, as technological advances, environmental issues and world events have shaped our lives and the way the food and agriculture industry conducts business. This year was no exception. We now have an increased emphasis on the need to protect our food, land and water resources against the very real threat of bioterrorism. Additionally, the emergence of plant and animal diseases across the globe poses a challenge for our state's food and agriculture industry.

After re-evaluation of department programs, goals and priorities, we found that, overall, the emergency preparedness mechanisms in place were solid and effective. Various programs were reviewed and enhanced to ensure an effective and rapid response to emerging pathogens and biosecurity issues. We will continue to evaluate and improve these programs as needed, focusing on four key areas: ensuring aggressive and comprehensive surveillance and inspection systems; effective consumer and industry education and communication; appropriate scientific and laboratory support; and well-organized emergency preparedness.

MDA remains committed to helping Michigan's agricultural community thrive while ensuring a fair and honest marketplace for Michigan citizens. Protecting Michigan's residents, animals, farmland and water, and, as always, safeguarding the quality of our food, remain our top priorities.

I hope you find this summary of the department's 2001 accomplishments informative and valuable. If you have questions or comments, or would like additional information, please contact the department toll-free at 800-292-3939.

Sincerely,

Dan Wyant
Director

NASS
FACT FINDERS FOR AGRICULTURE
UNITED STATES DEPARTMENT OF AGRICULTURE
in cooperation with the
Michigan Department of Agriculture

Michigan Agricultural Statistics Service
P.O. Box 26248
Lansing, Michigan 48909-6248

Phone: (517) 324-5300
Fax: (517) 324-5299
E-mail: nass-mi@nass.usda.gov
Web: www.usda.gov/nass

September 2002

The 2001-2002 edition of *Michigan Agricultural Statistics* provides both a current and historical perspective of Michigan's agricultural industry. These data are compiled into this annual publication through the cooperative efforts of the Michigan Department of Agriculture and the U.S. Department of Agriculture, National Agricultural Statistics Service. New items this year include Michigan export data and chemical use data for Nursery and Floriculture commodities. Collection of grape, peach, and sweet cherry chemical use data were funded by Project GREEEN. This and other related agricultural information can be accessed at http://www.usda.gov/nass/mi/.

A brief look at 2001 shows many Michigan producers experienced a difficult and challenging production year. Although total cash receipts of nearly $3.5 billion were 4 percent higher than 2000, generally lower commodity prices coupled with drought conditions kept cash receipts for several commodities well below last year. Field crop receipts were down 3 percent from 2000. The increase in corn revenue was more than offset by a decrease in soybeans, sugarbeets, and a disastrous dry bean crop. Vegetable receipts over all remained slightly positive with asparagus and snap beans down substantially while processing tomatoes and onions moved up. Cash receipts from the fruit sector were down nearly 10 percent from the previous year largely due to weakness in apples and a devastated grape crop. The livestock industry showed nearly a 12 percent increase in receipts. Both milk and the poultry and eggs sectors proved strong in contrast to weakness in cattle and calves. Cash receipts for floriculture and nursery were up nearly 9 percent from 2000. More detail and specifics are available in this publication.

The tremendous voluntary support from Michigan growers and agribusinesses makes the information in this publication possible. As we prepare for the 2002 Census of Agriculture which starts in December, the **"Agriculture Counts"** theme will be amplified again. Support will be needed from every grower to make sure Michigan is accurately represented, especially at the county level. We applaud those who completed the 1997 Census of Agriculture resulting in an 87 percent response rate. Reaching more small producers will help us meet the 2002 goal of 90 percent. Every grower needs to respond to show the true value of Michigan agriculture.

The Michigan office and enumerator staff are dedicated to providing you the most reliable agricultural information possible. Please provide comments and suggestions on how we can serve you better.

Sincerely,

David D. Kleweno
State Statistician

# Contents

## Part I
## MDA Annual Report 2001


Director's Summary . . . . . 1
Commission Summary . . . . . 2
Executive Office Summary . . . . . 2

**Division Accomplishments** . . . . . 3
Agriculture Development Division . . . . . 3
Animal Industry Division . . . . . 5
Environmental Stewardship Division . . . . . 6
Fairs, Exhibitions and Racing Division . . . . . 7
Finance and Administrative Services Division . . . . 8
Food and Dairy Division . . . . . 8
Human Resources Division . . . . . 9
Laboratory Division . . . . . 9
Marketing and Communications Division . . . . . 12
Michigan Agricultural Statistics Service . . . . . 13
The Office of Racing Commissioner . . . . . 14
Pesticide and Plant Pest Management Division . . 15
Technology Services Division . . . . . 17
Conclusion . . . . . 17


## Part II
## Michigan Agricultural Statistics 2001-2002


**Farm Economics** . . . . . **1**
National rankings . . . . . 1
Farm numbers and acreage . . . . . 2
Farm income . . . . . 2
Prices received, livestock . . . . . 7
Farm marketings . . . . . 8
Prices received, crops . . . . . 9
Production expenses . . . . . 10
Agricultural Exports . . . . . 11
Farm labor . . . . . 12

**Chemical Usage** . . . . . **13**

**Field Crops** . . . . . **26**
Weather summary . . . . . 26
Area and value . . . . . 26
Record highs and lows . . . . . 27
Barley . . . . . 28
Corn . . . . . 28
Dry edible beans . . . . . 31
Hay and haylage . . . . . 33
Maple syrup . . . . . 34
Mint . . . . . 34
Oats . . . . . 34
Potatoes . . . . . 35
Soybeans . . . . . 36
Sugarbeets . . . . . 39
Wheat . . . . . 39

**Fruit** . . . . . **41**
Record highs and lows . . . . . 41
Apples . . . . . 43
Blueberries . . . . . 43
Cherries, sweet . . . . . 43
Cherries, tart . . . . . 44
Grapes . . . . . 44
Peaches . . . . . 45
Plums . . . . . 45
Strawberries . . . . . 45
Fruit Inventory Highlights . . . . . 46

**Vegetables** . . . . . **48**
Record highs and lows . . . . . 48
Processing . . . . . 49
Fresh market . . . . . 50
Dual purpose . . . . . 51
Mushrooms . . . . . 51

**Horticulture** . . . . . **52**
Growers and growing area . . . . . 52
Floriculture crops . . . . . 53
Bedding plants . . . . . 54
Hanging baskets . . . . . 55
Potted flowering & annual bedding plants . . . . . 56

**Livestock, Dairy, & Poultry** . . . . . **58**
Record highs and lows . . . . . 58
Cattle and calves . . . . . 58
Poultry . . . . . 60
Hogs and pigs . . . . . 61
Honey . . . . . 63
Dairy . . . . . 63
Mink . . . . . 67
Sheep and lambs . . . . . 67
Trout . . . . . 69

**County Estimates** . . . . . **70**
County rankings . . . . . 71
**Field Crops** . . . . . **72**
Barley . . . . . 72
Corn . . . . . 73
Dry edible beans . . . . . 77
Hay . . . . . 80
Oats . . . . . 82
Potatoes . . . . . 84
Soybeans . . . . . 85
Sugarbeets . . . . . 86
Wheat . . . . . 87
**Livestock** . . . . . **89**
Cattle . . . . . 89
Hogs and pigs . . . . . 91
Hens and pullets of laying age . . . . . 92
Dairy . . . . . 93
Sheep . . . . . 94

**Customer Service**
Agriculture internet sites . . . . . 95
Internet and other services . . . . . 96
Subscription form . . . . . 97


All tables contain Michigan data unless otherwise noted. In some tables, details may not add to the total shown due to rounding.

## Part II Charts and Graphs


Major Michigan Commodity Groups, 2001 . . . . . 3
Top 20 Commodities in Cash Receipts . . . . . 3
Corn for grain acres, 1926-2001 . . . . . 29
Corn yield, 1926-2001 . . . . . 29
Corn production, 1926-2001 . . . . . 29
Corn progress . . . . . 31
Soybean progress . . . . . 37
Soybean harvested acres, 1926-2001 . . . . . 38
Soybean yield, 1926-2001 . . . . . 38
Soybean production, 1926-2001 . . . . . 38
Wheat harvested acres, 1926-2001 . . . . . 40
Wheat yield, 1926-2001 . . . . . 40
Wheat production, 1926-2001 . . . . . 40
Selected Floriculture Crops, 2001 . . . . . 53
Michigan Livestock: Value of Production, 2001 . . . . . 59
December 1 Hog Inventory, 1926-2001 . . . . . 63
Annual Milk per Cow 1974-2001 . . . . . 65
Agricultural Statistics Districts . . . . . 70

# Part I:

# Michigan Department of Agriculture Annual Report 2001

# ANNUAL REPORT 2001

## Director's Summary

The Michigan Department of Agriculture (MDA) is charged with a variety of program responsibilities that affect every person who lives, works, or simply travels through Michigan. Each division of MDA strives toward program goals that reflect the department's main priorities of:

- Food Safety and Security;
- Environmental Stewardship;
- Animal and Plant Health and Protection;
- Viable Agriculture Economy; and,
- Consumer Protection.

This annual report highlights MDA's key achievements during 2001.

The department successfully implemented and enhanced programs to protect and preserve Michigan's food and agriculture industry, and our state's natural resources. During 2001, MDA:

- Completed a two-year process to overhaul all of MDA's food safety laws and regulations covering food and dairy products. More than 25 laws and regulations were updated and consolidated into three major laws, with a greater emphasis on foodborne illness prevention.

- Increased food safety and security efforts, especially in light of potential agri-terrorism threats. This has improved MDA's ability to trace food products to their origin and to develop mitigation strategies to prevent potential pesticide or pathogen contamination.

- Initiated a new electronic inspection system, "E-inspector". This will incorporate nearly all of MDA's food inspection activities by fall of 2002.

- Implemented the Conservation Reserve Enhancement Program (CREP). During the first year, more than 36,000 acres in three priority watersheds were enrolled in the CREP program, to improve water quality, prevent soil erosion, and enhance wildlife habitat.

- Increased new enrollments and reduced the amount of land set to expire out of a program to preserve farmland and open spaces. Currently, the state holds more than 50,000 agreements with landowners through the Farmland & Open Spaces Act, preserving over 4.3 million acres of farmland - 40 percent of the state's total farmland.

- Protected Michigan farmers' rights to farm while ensuring sound environmental stewardship through continued review, enhancement and implementation of scientifically-based Generally Accepted Agricultural Management Practices (GAAMPs).

- Launched the Michigan Agriculture Environmental Assurance Program (MAEAP) as a part of Michigan's agricultural pollution prevention strategy to proactively help producers reduce legal and environmental risks, and to promote effective stewardship practices that comply with state and federal regulations.

- Protected Michigan's groundwater supply through programs that collect and properly dispose of outdated agricultural chemicals, and work with landowners to properly seal abandoned wells.

- Made great strides toward eradicating bovine tuberculosis from Michigan's cattle herds and regaining Michigan's TB-free status through testing and surveillance of Michigan's cattle, goats, bison and privately owned cervids. Over 760,000 animals have been tested to date.

- Strengthened Michigan's testing and diagnostic capabilites and our ability to effectively handle emerging animal and public health issues through the construction of a new Animal Health Diagnostic Laboratory and renovations at MDA's Geagley Laboratory.

- Prevented the introduction of invasive plant pests and foreign animal diseases through routine inspections of nursery stock, agricultural commodities, and animal feeds.

- Monitored insect and animal populations, and tested blood samples to identify and prevent the spread of zoonotic diseases, including West Nile Virus and other arboviruses.

- Expanded value-added initiatives and marketing efforts to attract, expand or retain food processing companies, develop new products and new domestic and international markets for Michigan agricultural producers and agri-businesses.

- Fostered alliances with producers, industry organizations and other agencies to ensure coordinated efforts for improving research opportunities and protecting markets, resources and jobs in Michigan's agriculture sector.

- Ensured gasoline quality and quantity standards through a rigorous sample testing, inspection and fraud investigation program, to protect consumers and the industry from economic losses and unfair trade practices.

- Ensured the accuracy of all weights and measures used in commerce, including scales, taxi meters, gasoline pumps, through various sampling and testing programs.

- Encouraged participation and youth involvement in agriculture at Michigan's 87 county and local fairs and two state fairs to ensure that Michigan residents stay connected to their agricultural roots.

**MDA Regional Offices**

MDA's seven regional offices play a vital role in providing services to our customers. Located throughout the state, experts are available to offer assistance to the industry and residents quickly and efficiently. In most cases, problems are solved at a regional level, allowing businesses to continue serving their customers effectively in accordance with state laws and regulations.

# Commission Summary

The Michigan Commission of Agriculture is appointed by the Governor to establish policies and provide administrative direction for the Michigan Department of Agriculture. The five commission members are appointed for a four-year term, with confirmation of the Michigan Senate.

Commissioner Jordan Tatter chaired the commission in 2001. Commissioner Doug Darling served as vice-chair and Commissioner Jim Maitland served as secretary. Other commissioners serving during 2001 were Bill Pridgeon and Nora Viau, both of whom were appointed by Governor Engler at the beginning of the year. In December 2001, Commissioner Jim Maitland was re-appointed to a second four-year term by the Governor.

The Michigan Commission of Agriculture met 10 times in 2001. The commission did not meet in April or October. In keeping with the Commission's desire to meet throughout Michigan, meetings were held in East Lansing (February, March and July), Frankenmuth (June), and Escanaba (August). All other meetings were held in Lansing. Meeting in various parts of the state increases constituent input, and allows the Commission to get first-hand information about local issues from those directly involved. The Commission met in conjunction with Agriculture and Natural Resources Week at MSU, Ag Expo at MSU, and the Upper Peninsula State Fair in Escanaba. The Commission also held a joint meeting with the Natural Resources Commission in March, 2001.

Bovine TB was the single biggest issue on the Commission agenda in 2001, followed closely by Generally Accepted Agricultural Management Practices (GAAMPs) and Right to Farm issues. Other issues of concern during 2001 were Agricultural Processing Renaissance Zones, international marketing programs, agricultural development opportunities in Michigan, the Julian-Stille Value Added Agriculture Development Act, Foot and Mouth Disease, a drought disaster, West Nile Virus, the Michigan Agricultural Environmental Assurance Program (MAEAP), laboratory renovation, and Plum Pox Virus.

Commission staff prepared meeting notices, agendas, minutes and director's reports for each meeting. Staff also prepared nine resolutions that were adopted by the Commission during the year. The Commission conducted all of its meetings and other activities within its budget of $37,500.

# Executive Office Summary

MDA's Executive Office oversees the administrative and policy issues of the department. The Executive Office consists of the director, deputy director, director of agriculture policy, legislative liaison, public information officer and support staff.

The director is appointed by the Michigan Commission of Agriculture and acts as the chief executive officer of the agency. The director also works in concert with the commission on policy issues and serves as the department's liaison with the Governor's Office and the Michigan Legislature.

The deputy director is responsible for managing the department's day-to-day operations, and works closely with the department's division directors and key program staff to oversee program functions.

The director of agriculture policy works with the director and other key personnel to review, revise and propose department programs and policies. He also serves as the key contact for federal issues and congressional contacts.

The legislative liaison is MDA's link to the Michigan Legislature and the Michigan Office of Regulatory Reform.

The public information officer serves as the department's point person and spokesperson for media contacts and the public regarding MDA programs and issues.

# Division Accomplishments

*Top division accomplishments for 2001*

## Agriculture Development Division

The Agriculture Development Division (AgD) serves as a clearinghouse for a variety of agriculture development and marketing assistance programs. The division also works to strengthen profitability for Michigan's family farms, and to enhance business opportunities for the food and agriculture industry. During 2001, AgD staff:

- Leveraged over $5 million in federal and private funds for Michigan's agriculture industry. This represents greater than a 5:1 return on state investment. Of the sum, more than $4 million is being directed toward Michigan's specialty crops to promote and enhance their markets, to retain or expand value-added agricultural processing or production operations in Michigan, and to provide comprehensive risk management education and information.

- Provided $150,000 through the MDA International Market Development Grant Program to 11 Michigan food and agricultural organizations. It is estimated that these proposals will likely leverage $318,000 worth of federal and private export development funds. The Massachusetts Institute for Social and Economic Research (MISER) export tracking service, located at the University of Massachusetts, indicated that Michigan agriculture exports have increased in markets in which state export development grants were utilized. For example:

  Costa Rica Market Development Activities
  Michigan Bean Commission received $11,500 in MDA International Market Development Grants in FY '00 & FY '01. Exports in the first nine months of 2001 were up 2,019 percent over the first nine months of 2000, representing a 61 to 1 return on public investment.

  German Market Development
  The Michigan Cherry Committee received $54,000 in MDA International Market Development Grants during FY '00 & FY '01. Michigan cherry exports increased 116 percent between 1999 and 2000. Exports in the first nine months of 2001 were 67.41 percent higher than all of 2000. This represents a 44 to 1 return on public investment for FY '00 and a 31 to 1 return on public investment for FY '01.

- Protected Michigan's food and agriculture trade interests as the World Trade Organization and its 140-nation trade ministers launched a new international trade round that must be completed by 2005. The new round of negotiations provides a tremendous opportunity to break down trade barriers, reduce tariffs, improve market access, and eliminate unfair export subsidies in both agricultural and industrial sectors.

- Organized a coalition of the apple, blueberry, cherry and cranberry processing industries to conduct market research on the potential for sales to the Mexican baking industry. The market research formed the basis of a proposal to the USDA for funding to conduct market development activities targeting the Mexican baking industry. MDA proposals were awarded $78,500 in USDA funds and the promotion is currently being implemented.

- Provided funding through the International Market Development Program which enabled the Michigan Potato Industry Commission to host a delegation of managers from Costa Rican potato chip manufacturers at the Snack Food Industry Association trade show, known as SNAXPO, in Orlando, Florida. Staff also gave a bilingual market development presentation on Michigan potatoes to Costa Rican buyers.

- Worked with various Michigan food processing companies providing environmental advice on waste management and composting issues.

- Helped 29 Michigan firms apply and qualify for $368,850 in federal funds to reimburse their export development costs through the Midwest International Agri-Trade Council's (MIATCO) Branded Market Access Program.

- Coordinated Michigan's largest pavilion ever at the Food Marketing Institute/U.S. Food Export Showcase in Chicago. Seventeen firms exhibited in the pavilion during the largest grocery store trade show in the world.

- Leveraged $15,000 in federal Generic Market Access Program monies, and recruited fifteen Michigan winer-

ies, on behalf of MIATCO, to participate in the Midwest Wine Pavilion at the Pro Wein show staged in Dusseldorf, Germany, in 2001.

- Leveraged $25,000 in federal Generic Market Access Program monies, and recruited three Michigan pickled vegetable processors, on behalf of MIATCO, to participate in a promotion of U.S. pickles in Korea. Korea is the largest export market for U.S. pickles and Michigan produces over 27 percent of pickling cucumbers in the country.

- Leveraged $20,000 in USDA Generic Market Access Program monies, and proposed and organized a processed apple promotion targeting the Caribbean and Central American markets. Activities included trade publication advertising and participation in a food show in the Dominican Republic. Three Michigan apple processors were recruited to participate in the activity.

- Organized a briefing at the direction of the Michigan Agriculture Export Advisory (MAXA) Council, for agriculture industry leaders on the implications for Michigan's agricultural economy of China's accession into the World Trade Organization.

- Administered a $42,363 grant from the USDA Emerging Markets Office to assist Michigan's elk velvet industry in developing an informational and educational program to lift an import ban by Korea on American elk velvet.

- Coordinated several efforts with industry groups to bring international buyers to Michigan from Costa Rica (Michigan chipping potatoes), South Korea (Michigan elk velvet), United Kingdom (Michigan wines), and Russia (Michigan blueberry plants).

- Worked with Michigan's corn industry and local and state agencies to facilitate the development of the first commercial ethanol plant in Michigan. This $60+ million facility, located in Caro, will utilize 15 million bushels of Michigan corn annually and produce 40 million gallons of fuel ethanol. A $4.8 million state grant and a Renaissance Zone designation providing state and local tax abatement for up to 15 years were provided as incentives to build the plant in Michigan.

- Organized an "Agricultural Development Exploring Meeting" in November, 2001, for a proposed $47 million agricultural development known as "Millennium Egg, Inc." The development would include a 2.5 million chicken farm combined with a first-stage egg cleaning, breaking and processing facility and a feed mill. This proposed integrated operation must meet all of Michigan's Right to Farm Generally Accepted Agricultural Management Practices (GAAMPs) for siting, animal care and manure management, along with several other state regulatory environmental standards.

- Coordinated efforts to designate the state's third Agricultural Processing Renaissance Zone (APRZ). Ultimately, the construction of a new $9 million building adjacent to the Sunny Fresh Foods plant in Lake Odessa was approved, which will result in 25-50 new jobs and new contracts with restaurants for poached egg and breakfast burrito products.

- Assisted in the organization of the Great Lakes Pork Cooperative to seek value-added, supplemental markets for Michigan pork producers. Support and paid memberships were received from 110 pork producers from across Michigan, Indiana and Ohio.

- Assisted in the organization of the North Country Beef Producers to help make their cow-calf operations sustainable. This group formed in response to market access concerns in Northeast Michigan following the identification of bovine TB in that area.

- Organized a Michigan Conference on Organic Agriculture, March 3-4, 2001, at Michigan State University. The conference, with over 500 attendees, focused on organic production and management issues, marketing strategies, inspection and certification procedures, and the economics of organic agriculture.

- Coordinated a cooperative agreement with the U.S. Department of Agriculture Risk Management Agency to conduct risk management information and education for Michigan's specialty crop producers. In turn, MDA leads a public-private partnership with Michigan State University-Extension, Michigan Farm Bureau, Small Business Development Centers, Michigan Integrated Food and Farming Systems, and others in offering this valuable service.

- Chaired the North Central Sustainable Agriculture Research and Education Administrative Council. This program has awarded more than $10 million in competitive grants in the 12 north central states to farmers and ranchers, researchers, educators, nonprofit organizations and others, to foster and explore sustainable agriculture.

- Coordinated review of the Final National Organic Program Rules issued by U.S. Department of Agriculture. The rules were compared and contrasted to the Michigan Organic Products Act of 2000, administered by MDA.

- Received $47,050 from the USDA Federal State Market Improvement Program (FSMIP) to determine the impact of agriculture-based destinations on Michigan's tourism economy.

## Animal Industry Division

The Animal Industry Division (AID) safeguards the health and safety of livestock and domestic animals in Michigan. The division monitors animal diseases, diseases transmitted by animals, and potential food safety hazards, to protect the health of Michigan residents and animals. The division is responsible for administering reportable animal disease programs and overseeing toxic substance contamination incidents relating to animal health. AID also oversees the humane treatment of animals through the licensing and regulation of animal shelters, dog pounds, pet shops, and riding stables. The State Veterinarian administers the division, and supervises animal disease surveillance and eradication programs throughout the state. During 2001, AID:

- Undertook major bovine tuberculosis (TB) testing activities, including completion of testing of all dairy cattle in Michigan and the diagnosis and handling eight new TB-affected cattle herds.

- Completed major enhancements and refinements of the Bovine Tuberculosis Eradication Program, including the establishment of a high risk area in the northeast Lower Peninsula in January, 2001, and the release of the quarantine in the same area, which had been in place since January, 1999. Staff also audited and revamped the bovine TB database and filing systems; developed a system to ensure prompt indemnity and producer assistance payments; implemented an electronic ID program; and visited over 140 slaughter facilities to provide education about bovine TB and other animal diseases and to enhance submission of slaughter samples.

- Played a major role in the development of Michigan's Foot and Mouth Disease (FMD) Emergency Response plan, including a large test exercise. AID also sent a staff veterinarian to the United Kingdom to participate in their FMD eradication program.

- Successfully implemented a new privately owned cervid registration program. This eventually will be the largest registration program in the division.

- Participated in the effort to address the first-time occurrence of West Nile virus in Michigan by coordinating horse surveillance activities.

- Maintained Michigan's negative status of three important animal diseases: brucellosis, salmonella pullorum, and pseudorabies. This involved several suspect disease investigations, active disease surveillance programs, and training and registration of pullorum testers.

- Completed over 50 animal drug residue violation investigations as part of an FDA program to enhance food safety. The violations were found through animal sampling procedures in slaughter plants. These investigations determine the source of the residue and provide an opportunity to educate producers on how to avoid residues in the future.

- Received a grant from the U.S. Department of Agriculture's Food Safety Inspection Service to enhance animal production food safety. Four meetings for veterinarians and four meetings for producers were held, focusing on on-farm food safety.

- Implemented a new law requiring one-time mandatory Equine Infectious Anemia (EIA) testing of all horses in Michigan. Approximately 85,000 horses were tested in 2001. Sixteen positive horses were found. These cases led to testing of almost 300 herd mates and contact animals.

- Maintained active surveillance for Eastern Equine Encephalitis (EEE), working cooperatively with other divisions, other agencies, and Michigan State University. No horses were found to have EEE in 2001; however, there was one human fatality and four people became ill.

- Investigated 45 cases of rabies. A rabid cow was found in 2001, representing the first case of rabies in a cow in many years.

- Provided regulatory oversight for 176 pet shops (115 inspections), 198 animal shelters (149 inspections), and 100 riding stables (71 inspections).

- Performed health checks on all livestock at both the Upper Peninsula State Fair and Michigan State Fair.

AID staff also visited numerous county fairs to provide information on animal health regulations and to stress the public health importance of hand washing before and after handling and petting animals.

## Environmental Stewardship Division

The Environmental Stewardship Division (ESD) administers programs related to environmental protection and agriculture pollution prevention. Environmental stewardship activities ensure that farming operations protect land, water resources, and public health. During 2001, the division:

- Awarded 11 grants to Conservation Districts to provide technical assistance to landowners enrolled in the Conservation Reserve Enhancement Program (CREP). As of the end of 2001, 1,689 miles of 100-foot wide filter strips (20,477 acres); 9,522 acres of wetland restorations and shallow water areas for wildlife (including 2,579 acres of wetlands and 6,943 acres of native warm season grass upland buffers); 4,776 acres of highly erodible land (into whole field conservation cover plantings); and 793 acres of windbreaks, have been enrolled in CREP.

- Developed the Permanent Conservation Easement Program (PCEP), a state-sponsored component of CREP. PCEP is a voluntary program that will compensate landowners for placing a perpetual conservation easement over the footprint of eligible CREP practices. Forty-seven landowners have applied, representing over 3,500 acres.

- Initiated the Livestock Access Program (LAP), another state-sponsored component of CREP, that provides producers 100 percent reimbursement for installation and establishment of practices to control or exclude livestock access to surface waters.

- Implemented the Agriculture Pollution Prevention Act, which gives MDA the authority to establish and administer programs to prevent pollution from agriculture and private landowner activities through voluntary, incentive-driven strategies.

- Launched the Michigan Agriculture Environmental Assurance Program's (MAEAP) Livestock System which includes educational sessions, Comprehensive Nutrient Management Plan (CNMP) assistance, and the development of farm specific verification. Over 1,200 producers and technical assistance providers have attended Phase 1 educational sessions.

- Coordinated efforts with MAEAP partners and the Virtual University at MSU to develop a MAEAP-specific web site, www.maeap.org.

- Worked one-on-one with nearly 1,000 farmers to identify groundwater risks and to develop plans to reduce those risks. Implemented Groundwater Stewardship Practices, including: 652 abandoned well closures, 479 emergency plans, 195 spill kits, 13,546 acres of custom pesticide application, 11,933 acres of pre-sidedress nitrate testing, and 3,156 acres of integrated pest management.

- Coordinated the collection and recycling of 39,194 pounds of properly rinsed pesticide containers, with 93 agri-businesses participating as collection sites; and implemented a pilot program for recycling 300-500 gallon mini-bulk pesticide containers.

- Collected, removed, and properly disposed of 144,480 pounds of pesticides and mercury in FY 2001, through the Michigan Groundwater Stewardship Program's Clean Sweep program. This represents a 44 percent increase over FY 2000. Sixteen permanent Clean Sweep sites have been established to date throughout the state.

- Sampled 129 domestic wells in FY 2001 as part of ongoing MDA baseline domestic well studies. The wells were selected at random from the population of Michigan domestic well logs. Samples were analyzed for 75 pesticides and 66 volatile organic compounds, including a number of fumigants.

- Worked with 80 conservation districts to develop countywide resource assessments and strategic plans. These documents will guide the conservation efforts of the local conservation districts for the next three years.

- Administered the Cooperative Resource Management Initiative (CRMI), which began in fiscal year 2000, by combining existing natural resource assistance programs into a comprehensive statewide program. Through CRMI, MDA assisted over 18,000 landowners and other citizens on over 200,000 acres; conducted nearly 1,400 government agency assists; facilitated over 800 comprehensive management plans on 47,000 acres; conducted nearly 700 public programs and demonstrations; and prepared 450 newspaper, newsletter, TV and radio articles and announcements. In addition, approximately

$5.3 million of stumpage (standing timber) was put on the market as a result of CRMI technical assistance and referrals.

- Administered 33 petition projects through the intercounty drain program, benefiting 183 miles of drain and 1,225,600 acres. Approximately $400,000 of the petition program was provided from the Federal Emergency Management Administration Hazard Mitigation Grant Program.

- Responded to 120 drain maintenance requests in 38 counties, totaling nearly 330 miles and serving almost two million acres of watershed.

- Inspected and licensed over 4,321 individual living units for migrant workers with a capacity of 23,915 workers at 905 locations. Administrated $950,000 through the migrant labor housing construction grant program, resulting in producers investing $2.8 million in housing construction projects, with significant improvements to over 840 living units and the establishment of 162 new living units.

- Responded to 157 new environmental complaints through the Right to Farm program, an increase in the number of complaints for any 12-month period. Received 13 requests for Site Selection and Odor Control GAAMP verification, nine of which have been verified to date.

- Partnered with the Michigan Water Environment Association to develop a one-day seminar on advanced treatment and technology for biosolids land application, and assisted MSU Extension with the creation of two education pieces and a quarterly newsletter to improve awareness of the Michigan Biosolids Program and land application.

- Completed 18 farmland development rights easements covering 10 counties, permanently protecting an additional 1,585 acres.

- Processed 276 new applications to protect farmland through the Farmland Development Act, which was a significant increase over past years. The increase in participation is attributed to the enactment of Public Act 421 of 2000, which changed the amount of tax credit individuals may receive under the current Farmland Development Act (P.A. 116), and reduced the income threshold from 7 percent to 3.5 percent. Renewals in the program also increased, with more than 80 percent of the agreements due to expire extended, compared to a typical renewal rate of 60 to 70 percent.

## Fairs, Exhibitions, and Racing Division

The Fairs, Exhibitions and Racing Division (FER) oversees Michigan's state and county fairs, and associated horse racing programs. FER also administers grant programs for these 88 fairs, and the horse racing industry. FER staff during 2001:

- Partnered with fair and festival management to present workshops on disaster planning, new board member training, youth horse racing, and team building.

- Led a task force to study water safety issues at fairgrounds. Six fairs took part in the initial study and each was visited prior to and during the fair.

- Implemented the Youth Horse Racing Program with 21 participants at two county fairs during the 2001 fair season.

- Offered an additional granting period for the Livestock Competitive Grant program to encourage more participation, and awarded 29 grant recipients a total of $120,000.

- Implemented a statewide fine arts contest. Six classes were offered with a $400 premium for each class. Judging took place at the Michigan Association of Fairs and Exhibitions Annual Convention.

- Awarded expansion grants to 19 fairs, allowing the fairs to receive up to 50 percent funding for increases in exhibitor numbers, new classes, and premium increases.

- Presented six $1,000 awards to youth exhibitors and an additional $21,000 in educational awards to 107 exhibitors, through the Michigan Youth Livestock Scholarship Fund.

- Coordinated the collection of $2,360 contributed by MDA employees and purchased hogs at the livestock auctions at the UPSF and MSF.

- Received the First Place Communication Award for Advertising and Merchandise at the Michigan State Fair (MSF) from the Michigan Association of Fairs. The MSF finished in the black this year, the second time in the past 30 years that this has been accomplished.

- Raised $196,150 at the MSF Youth Livestock. The event attracted many new participants and the Champion Steer and Champion Lamb both broke the previous year's records, selling sold for $44,000 and $25,000, respectively.

- Received an award of excellence for the Upper Peninsula State Fair (UPSF) at the International Association of Fairs and Exhibitions convention in Las Vegas. The UPSF finished in the black in 2001.

- Created the Youth and Technology Building at the UPSF to help youth stay in touch with contemporary times, while maintaining agricultural roots. Computer-generated programs created by youth and commercial agricultural programs were available for the public to view and operate.

## Finance and Administrative Services Division

The Finance and Administrative Services Division (FAS) administers business processes for the department, including budget, accounting, auditing, procurement, facility management, travel arrangements and mail operations. During 2001, FAS:

- Facilitated moves of departmental offices into the Constitution Hall in Lansing and the Saginaw and East Lansing regional offices. The October 2001 move into Constitution Hall occurred after more than two years of extensive planning and resulted in all central staff, with the exception of the Technology Division, being moved into the new facility primarily during one weekend.

- Presented, in partnership with the Michigan Department of Education and the State Employees Credit Union, several fiscal stewardship seminars for employees. Seminar topics included funding long term care, applying for financial aid, investment ideas, and many other topics. These seminars were presented as the division recognized that knowledge gained in staff's personal life carries forward into their professional lives.

- Coordinated the completion of the department's Bi-Annual Internal Control Assessment to evaluate the department's internal controls in place to safeguard assets, check accuracy and reliability of accounting data, etc. Each administrative area performed individual assessments. The findings of these individual assessments were combined and presented as the department's assessment.

- Coordinated the completion of an inventory of an organizational culture assessment for MDA. The inventory surveyed departmental staff to evaluate basic assumptions, shared values and beliefs that guide the way employees behave toward each other and their approach to their work. The division summarized the evaluations and reported the findings that were instrumental in the departments strategic planning efforts.

- Began efforts to streamline and clarify the department's contract, grant, and resource management processes. These improvements, when completed, will enable the division to effectively and efficiently support the department's fiscal management.

## Food and Dairy Division

The Food and Dairy Division (FDD) administers all food, beverage and dairy laws in Michigan to fulfill its mission of protecting the public health and ensuring a wholesome food supply. FDD regularly inspects food and dairy products from farms, restaurants, grocery stores and other food establishments. The division also strives to maintain a viable food industry by lending support and assistance to food producers, and functioning as an information source for consumers and stakeholders. Food safety is the division's top priority. In 2001, the division:

- Conducted 27,185 inspections at food and dairy facilities; and investigated 1,680 food-related complaints.

- Provided over 120 formal presentations on the new Michigan Food Law and Food Code targeted to specific audiences. Field inspectors, during routine inspections visited one-on-ne with store managers to discuss and share training materials and answer questions about the new law. In August 2001, the enforcement policy was put into place to coincide with implementing the law.

- Collaborated with dairy farmers, milk haulers and processors, Michigan State University staff, industry organizations, and MDA staff to substantially update Michigan's dairy laws, making food safety the focal point and consolidating a number of old laws into a more comprehensive act with a uniform set of definitions and standards. The work group combined 20 laws and regulations into two updated acts: The Manufacturing Milk Law and the Grade A Milk Law. One of the major goals of this project was to adopt the 2001 revision of the federal Pasteurized Milk Ordinance which is the milk safety standard for all fifty states. The legislation was unanimously supported in the Legislature and signed into law on January 9, 2002.

- Installed the License 2000 system for food and food service licensing. The system went online in February 2002, and will provide the foundation for a corporate-wide database.

- Conducted a thorough process review of the dairy inspection system in June 2001 in preparation for the department-wide E-inspection system. Under the E-Inspector (electronic inspector) system, inspectors, using a laptop computer and specialized software, upload inspection data daily to a core database. FDD staff made major progress on developing the E-Inspection System in 2001. Phase 1 was completed in March 2002.

- Completed the first three-year round of local health department accreditation. Out of 45 local health departments, 18 received accreditation with commendation, 23 received provisional accreditation and 4 did not receive accreditation.

- Led a multi-agency initiative to evaluate the safety of water supplies at six fairs in Michigan, and to identify effective risk reduction practices. Information from this survey indicates a clear need to work with fairs to improve water safety.

- Utilized the services of the Office of Performance Excellence to develop measurable performance outcomes for all major program areas.

## Human Resources Division

The Human Resources Division (HRD) supports department personnel in a variety of program areas, including the selection, hiring and compensation of department employees, as well as the administration of employee benefits, position classification, labor relations and training. The division also oversees programs that ensure equal employment and equitable representation of groups within the department's work force. Programs include: recruitment, student programs, career seminars, reasonable accommodation coordination, sexual harassment complaint investigation, health and safety coordination, and compliance with the Americans with Disabilities Act (ADA). During 2001, the division:

- Successfully implemented the Human Resources Management Network (HRMN) with minimal adverse impact or disruption of services to MDA

- Developed and delivered an eight-hour training module to all managers and supervisors relating to key issues such as performance management, counseling and discipline grievance processing.

- Implemented a new state performance management system, including development and delivery of mandatory training for supervisors and managers, and voluntary training for employees department wide.

- Successfully implemented several department-wide training programs, which included:

  A two-day Administrative Support Conference attended by approximately 85 employees.

  Personal Security Training to help employees deal with concerns resulting from our move to a new building.

  Timekeeper training required as a result of HRMN implementation.

- Developed a comprehensive pre-retirement packet to assist each division with the early retirements.

- Rolled out E-learning to all MDA employees.

## Laboratory Division

The Laboratory Division performs scientific and analytical services that support MDA programs. The laboratory also performs tests and offers technical consultation services for other state and federal agencies, as well as fee-based services to Michigan industry and private citizens. The Laboratory Division consists of two world-class facilities: the William C. Geagley Laboratory in East Lansing, Michigan, and the E.C. Heffron Metrology Laboratory in Williamston, Michigan.

The Geagley Laboratory performs more than 300 different kinds of biological, chemical and physical tests on a routine basis. The laboratory examines food samples, beverages, pesticides, seeds, fertilizers and feeds to ensure a safe food supply, verify labels, ensure compliance with state and federal regulations and to guarantee product quality. The Geagley Laboratory also monitors food and animal feed for contaminants, tests blood and urine from competing race horses for performance enhancing drugs, and tests livestock samples to prevent the potential spread of infectious diseases.

The Heffron Metrology Laboratory renders ultra-precise mass, volume and length calibration certification for Michigan businesses, and houses the consumer protection programs for Weights and Measures and Motor Fuels Quality. The metrology laboratory also conducts regulatory services; calibrating standards used for enforcement by the Michigan Treasury and Agriculture departments, Michigan State Police, and all county road commissions. The tests and analyses conducted by the metrology laboratory assure that weights and measures in Michigan comply with national standards, making items eligible for international trade, and preventing economic fraud and deception.

Although testing capabilities were reduced or suspended at times during the renovation process, all vital tests were performed to meet the needs of laboratory customers. During 2001, the division:

- Began two renovation projects. The Geagley Laboratory is currently in the final phase of a two-phase renovation project, which will provide an updated, state-of-the-art facility. The Heffron Laboratory also completed an addition project, which provided much needed meeting space and an additional garage area for storage and maintenance of field equipment.

- Tested over 200,000 regulatory and service samples for brucellosis, pseudorabies, Equine Infectious Anemia, anaplasmosis, bluetongue, Johne's disease and arboviral diseases (those diseases transmitted by ticks and mosquitos such as Eastern Equine Encephalitis). Animal Disease Surveillance staff successfully completed and passed all annual proficiency and check samples, and assisted the USDA with their testing program for classical Swine Fever.

- Performed over 170,000 tests on more than 25,000 samples submitted to the Equine Drug Testing (EDT) section. Over 18,000 of the total number of samples received were submitted for Total Carbon Dioxide (TCO2) testing only. Although the number of TCO2 samples increased, the number of positive TCO2 reported was down, showing evidence of a strong deterrent effect. There were three violations in the Lasix quantitation program with an additional three at the warning level. This year, screening techniques were improved, resulting in a greater variety of tests per sample. All seven "double blind" test samples, from the Association of Racing Commissioners International proficiency program, were correctly identified.

- Concentrated testing efforts during renovations on two federally funded programs, the Microbiology Data Program (MDP) and the Antimicrobial Efficacy Testing. MDP tests for pathogenic organisms on fresh produce such as lettuce, celery and tomatoes destined for grocery store shelves. The Antimicrobial program tests for the efficacy of disinfectant products purported to kill bacterial organisms.

- Tested 200 samples of soft serve ice cream for coliforms, standard plate count and Listeria sp.

- Tested 77 samples of apple cider for coliforms, standard plate count and E. coli 0157:H7.

- Successfully completed and passed all proficiency samples (both in dairy and food microbiology). The Food and Beverage section met all requirements and was awarded ISO 17025 accreditation (A2LA). The section is one of the first food microbiology and chemistry testing labs in the country to be so accredited.

- Completed the official program analysis and review process for Motor Fuels Quality, and began using the new Laboratory Sample Information Management System for tracking and reporting motor fuel samples in July 2001. The Motor Fuel Quality Section reported results on 1,452 gasoline samples for standards of quality in calendar year 2001.

- Screened 114 wheat samples for the mycotoxin vomatoxin. Of those, three were found to contain vomatoxin in excess of the five parts per million guideline level.

- Purchased, validated and implemented updated technology, which allowed the Pesticide Data Program to produce data with lower detection limits and increased confidence in the confirmation of detected analytes. One new commodity and new compounds were validated and rotated into the workload in addition to an overall increase in numbers of samples analyzed. Activities continue to focus on U.S. Environmental Protection Agency's data needs under the Food Quality Protection Act.

- Analyzed 258 food safety samples, representing an increase of about 25 percent over the previous year.

- Analyzed 268 groundwater samples for the State Management Plan (SMP). Samples were analyzed for five triazines and acetochlor. In addition, the Pesticide and Environment section began screening for two

break-down products of Atrazine. Staff analyzed 2,208 samples for the enzyme linked immunosorbent assay (ELISA) mobile lab program, which travels to different sites around the state and analyzes water samples for Nitrate/Nitrite and for Triazines.

- Analyzed 230 samples as part of pesticide use investigations, participated in the EPA/State Spring 2001 Check Sample program, receiving a satisfactory result, and reported 22 pesticide samples for formulation.

- Initiated an antimicrobial formulation testing program, and in cooperation with the U.S. EPA, received and reported out nine samples.

- Tested 92,484 stone fruit trees from nurseries, research stations and orchards for plum pox virus (PPV). All the samples collected were free from PPV. This was essential for the movement of stone fruit trees in the U.S., Canada and other foreign countries.

- Indexed and tested 12,600 scion-wood trees (apple, peach and plum) and bud-wood (cherry, apricot, nectarine and pear) for several viruses to provide disease-free trees to growers.

- Tested 303,043 blueberry plants from two nurseries for five viruses to facilitate movement of disease-free plants within Michigan, the U.S., and other foreign countries.

- Certified 10,250 acres of seed corn for several diseases to meet phytosanitary requirements for exports.

- Tested rose bushes to assess the incidence of apple mosaic virus in the plants that are shipped into Michigan to ensure consumers purchase disease-free plants.

- Worked with researchers and multinational agricultural companies, in cooperation with USDA/APHIS, to grant permits to test genetically engineered organisms in Michigan. MDA issued 45 permits for movement and release of genetically engineered organisms in the state.

- Tested samples from nurseries in 31 counties to facilitate movement of nursery stock and other agricultural products from Michigan.

- Tested approximately 1,985 service samples for farmers, seed companies, seed distributors and others to assess seed quality, for contract specifications and for compliance with Michigan seed quality standards. Assisted several seed suppliers with seed labeling compliance questions.

- Tested approximately 1,730 agricultural, lawn, vegetable and flower seed samples for Michigan Seed Law compliance. A non-compliance rate of 21 percent was determined.

- Tested 236 wild bird feed samples for compliance with Michigan Feed Regulations. A non-compliance rate of 25 percent was found due to the presence of viable noxious weed seed including morning glory, Johnsongrass, field bindweed and other serious weeds.

- Responded to over 1,100 consumer concerns regarding substandard gasoline and/or the wrong amount of gasoline from retailers. Over 160 stations were found to be providing substandard fuels. Many investigations revealed that gasoline transport drivers made errors in their delivery of the fuel or the pump installation companies made errors in maintenance or installation of the pumps that resulted in the premium and midgrade gasolines being substandard for octane. Fines and quality violations were issued to 104 gasoline retailers and 31 wholesalers. Problematic firms and drivers received corrective action counseling to assist in achieving compliance with the state's motor fuels standards.

- Monitored gasoline volatility at over 700 gasoline dispensing facilities to ensure that Southeast Michigan could maintain the National Ambient Air Quality Standards of less than 28 tons per day of volatile organic compounds in the atmosphere during the summer months. Three facilities found dispensing high volatility gasolines during on-site audits were required to suspend usage until the proper fuels could be obtained.

- Inspected 13,259 weights and measures devices at over 3,800 establishments. In addition, over 960 complaints involving allegations of short weight, short measure, and violations of the state's item pricing laws were investigated. About 17 percent of the commercial devices inspected failed to meet state requirements, representing an increase of 60 percent over 2000. In Detroit, 44 percent of the taxi meters inspected failed to meet requirements. In addition, 35 percent of the lots of packaged commodities inspected failed to meet net content requirements. The high device and packaged commodity failure rates and consistently high complaint levels generated an increase in enforcement actions to achieve compliance. Staff issued 121 warnings and held

eight compliance meetings (compared to 33 and two, respectively, in 2000). Three prosecution warrants were issued, all resulting in guilty or no contest pleas, with fines and costs in excess of $49,000 assessed (including four consent agreements).

- Completed the first full year of National Voluntary Laboratory Accreditation Program accreditation to ISO Guide 25 at the E. C. Heffron Metrology Laboratory. ISO Guide 25 has been replaced by new requirements in ISO-17025 so the work goes on preparing for the 2002 NVLAP on-site audit to the new requirements. Michigan will be one of the first state metrology laboratories to be accredited to the new standard enhancing Michigan's standing as one of the top metrology laboratories in the country.

- Submitted the required quality documentation to the National Institute of Standards and Technology (NIST) and received the NIST Certificate of Measurement Traceability.

- Continued to serve Michigan's automotive, pharmaceutical, chemical, service and other high tech industries requiring traceable calibrations by an accredited source.

## Marketing and Communications Division

The Marketing and Communications Division (MAC) creates a public identity for MDA, and serves divisions within the department as an in-house advertising agency by creating marketing and communications tools and consultation. The division handles marketing opportunities, promotions, publications, special events planning, and agricultural emergencies and disasters for the department. MAC also coordinates meetings and marketing activities for the Michigan Grape and Wine Industry Council. During 2001, MAC:

- Developed a MAC strategic plan that is aligned with the current MDA strategic plan, the blueprint for all programming within the division.

- Produced, on behalf of the department, over 150 brochures, newsletters, booklets, report covers, forms, maps, fact sheets, posters, displays, certificates, promotional materials, and other printed materials using the department's new standards and tracking system.

- Distributed promotional materials and information, coordinated special events, and attended 10 trade shows and conferences to promote Michigan food and agriculture products as part of the Select Michigan marketing campaign.

- Implemented department standards for all MDA publications, and developed a database and tracking, filing and archiving system for materials and projects developed by the department.

- Established and implemented a liaison system that assigns a specific MAC representative to each MDA division, to further assist divisions with their marketing and communications needs.

- Developed photographic murals and artwork, directional signs and banners for the department's new offices at Constitution Hall in Lansing that feature the history, diversity and importance of agriculture to Michigan.

- Served on the committee that coordinated the delivery of the 2001 Tree of Hope from Michigan's Ottawa National Forest to Washington, D.C., to serve as the holiday tree on the lawn of the nation's Capitol, including several stops for celebrations in Michigan communities along the way. Following the tragedies of September 11, 2001, the Michigan tree ceremony in Washington, D.C., was the only national holiday tree-lighting ceremony open to the public.

- Served on the Governor's Terrorism Task Force, which drafted the Michigan Three-Year Domestic Preparedness Strategy. This strategy was submitted to the U.S. Department of Justice in November of 2001 and was immediately accepted. DOJ awarded Michigan $4.6 million to carry out the strategies identified by this committee. Michigan became only the fifth state in America to qualify for such funding.

- Developed and tested a Foot and Mouth Disease Emergency Response Plan. Over 80 participants from the Governor's office, 12 state agencies, five federal agencies, and eight members of constituent animal organizations spent the entire day playing a mock exercise scenario that involved the spread of Foot and Mouth Disease to three Michigan farms. This was a significant exercise, the largest ever held at the Michigan Emergency Operations Center, and served as a model used by the Federal Emergency Managment Agency for similar exercises in other Midwest states.

- Coordinated MDA's response to 11 serious incidents involving disasters or threats to food or animal safety

and/or agricultural economic viability. Of these incidents, one was declared an emergency by the President, two were declared disasters by the Governor, and three disaster requests were submitted to the Secretary of USDA, all of which were approved.

- Coordinated participation of department emergency management staff in two drills and one exercise for the DC Cook Nuclear Power Plant in June and July. Staff also participated in an energy emergency exercise simulating an energy shortage, similar to what has been experienced in California this summer. The MDA Director is one of four members of the Energy Emergency Policy Committee.

- Represented MDA on the Michigan Hazard Mitigation Coordinating Council, chairing the council's Legislative Committee. The committee successfully drafted and obtained the Governor's support and signature on Executive Directive 2001-5, which requires all state agencies to consider flood hazards and floodplains as they develop policies and construct facilities.

- Conducted a two-day training session on terrorism for all MDA emergency managers, in conjunction with the Michigan Terrorism Conference in Lansing.

- Provided basic training in emergency planning to the managers of all seven Michigan horse race tracks under the jurisdiction of the Office of Racing Commissioner. All tracks will develop an emergency plan in 2002.

- Coordinated eight public hearings during 2001. One involved a referendum for commodity organizations organized under Act 232, one involved changes to conservation district boundaries under Act 451, and six involved establishment or amendments to administrative rules.

- Held three public meetings at the request of the Michigan Commission of Agriculture to gather public input on Generally Accepted Agricultural and Management Practices pending decision before the Commission.

- Conducted a referendum for a new commodity marketing program for the state's privately owned cervidae producers. The Michigan Deer and Elk Marketing Program joined the state's 14 other legislatively-organized marketing programs when the producers approved the program with an effective date of December 1, 2001.

- Coordinated two meetings of the Agricultural Marketing and Bargaining Board. Compiled data regarding MACMA (Michigan Agricultural Commodity Marketing Association) and non-MACMA purchases for processing of the 2001 apple and asparagus crops, and reported data to the board.

- Processed 391 Freedom of Information Act (FOIA) requests for MDA in 2001.

- Sponsored and coordinated participation of 18 wineries and 16 specialty food companies at the three-day Michigan Wine & Food Festival, at Meadow Brook Music Festival in Rochester Hills, attended by 10,000 people.

- Worked with wine industry members and the Michigan Liquor Control Commission to draft language for a proposed new type of winery license, a Farm Winery license.

- Published the *Michigan Wine Country* magazine, which was expanded to 32 pages, and a circulation of 200,000.

- Administered grants from the Michigan Grape and Wine Industry Council totaling $151,000 for viticulture and enology research at MSU.

- Coordinated the 2001 Michigan State Fair Wine Competition, which incorporated a new Superintendent (Chris Cook), a new judging venue (Kellogg Center, East Lansing), judges Bob Small and Bob Thompson from California and a record number of entries.

- Participated in approximately 35 selected wine tasting events to increase awareness of Michigan wines and the wine grape industry among consumers and key industry partners.

- Sponsored the Heartland Wine School, a three-day educational program at Kellogg Biological Station, with over 100 attendees (35 from Michigan) attending sessions on vineyard and winery establishment.

## Michigan Agricultural Statistics Service

The Michigan Agricultural Statistics Service (MASS) is responsible for the official Michigan agricultural database, which was established under a formal agreement between Michigan and the U.S. Department of Agriculture's National Agricultural Statistics Service (NASS).

During the growing season, MASS conducts numerous surveys and routinely prepares forecasts and estimates on acreage, yield and production of Michigan field crops, fruits and vegetables. Crop-weather information is provided weekly during the growing season to reflect current crop conditions and development progress. MASS also estimates Michigan's livestock, poultry and dairy populations, and tracks related commodity prices. The estimating program provides information on agricultural land values, farm numbers, land in farms, expenditures and labor. Growing areas, production and value of Michigan's floriculture industry are published annually. Another significant survey component involves collection of agriculture pesticide use data. MASS also conducts the Michigan Census of Agriculture every five years, and supplemental surveys are periodically performed regarding aquaculture, irrigation, horticulture, and land ownership. During 2001, MASS:

- Sampled peach and plum growers and asked them to cooperate in a Plum Pox Virus detection program.

- Provided county estimates for 15 major crop and livestock commodities as part of a cooperative program with MDA. Irrigated and non-irrigated corn yield data were collected in five Southwest Michigan counties to more accurately estimate overall county yields.

- Enhanced program coverage and published information on forage and silage production and rotational grazing practices.

- Published the Michigan Rotational Fruit Inventory, a complete enumeration of all Michigan commercial fruit farms. The bulletin included the number of farms, acreage, variety, and year of planting for 12 fruit crops, with additional information on rootstocks for selected species. Estimates of the loss of apple trees due to the 2000 fire blight epidemic in Southwest Michigan were also included.

- Collected data on the number of farms, acreage, and production of Michigan vegetable crops in the fall of 2001. The results of the vegetable crop inventory will be published in the summer of 2002.

- Established the framework and received legislative support to add a turf management survey to the rotational survey program.

- Completed the annual mid-June Tart Cherry Objective Measurement Survey in which fruit counts were made on a sample of about 520 tart cherry trees across the state. The data provided current crop production statistics for the Michigan tart cherry industry.

- Provided support to the Cherry Industry Administrative Board (CIAB) in the areas of administration and field production monitoring, for the tart cherry diversion program. CIAB regulates the amount of fruit entering the market in years when supply exceeds demand. National Association of State Departments of Agriculture (NASDA) enumerators, working through MASS, conduct the field work for this program.

- Collected chemical use information on nursery and greenhouse crops, corn, and six fruit crops. Survey data will be used to evaluate chemical use levels for the EPA, to use in setting worker safety standards and in administering the Food Quality Protection Act.

- Published the results of the Agricultural Economics and Land Ownership Survey (AELOS), a follow-up to the 1997 Census of Agriculture. This demographic information on farm operators and landlords was last collected in 1988.

- Released the annual statistics bulletin, which included details of the 2000 production, stocks, inventory, disposition, utilization and prices of agricultural commodities. The publication included MDA's annual report, Michigan rankings, record highs and lows, county estimates, and chemical usage data. This publication was formatted and printed with an automated system that greatly reduced development time and provided users quicker access to the data.

- Worked with the National Association of State Departments of Agriculture (NASDA), using telephone and field enumerator staff located throughout the state and employed by NASDA, to assist in collecting data from farmers and agri-businesses. NASDA enumerators also assisted MDA in screening livestock to be tested for bovine tuberculosis in the Upper Peninsula.

## The Office of Racing Commissioner

The Office of Racing Commissioner (ORC) is an independent agency within MDA that regulates pari-mutuel horse racing in Michigan, in accordance with the state's Horse Racing Law and the rules of the Racing Commissioner.

The Racing Commissioner, appointed by the Governor for a four-year term, prescribes rules, regulations and conditions under which all pari-mutuel horse racing meets are conducted in the state.

The ORC allocates race dates and issues track, race meeting and occupational licenses. The office also collects license and track revenues, appoints stewards and veterinarians to represent the state, approves track-appointed officials, and monitors the daily conduct of horse racing. ORC also conducts equine and human drug testing programs, and investigates any irregularities in racing that may lead to formal hearings and sanctions. ORC functions primarily as a regulatory agency, but also focuses on improving and promoting horse racing in Michigan. During 2001, ORC:

- Upgraded technology and increased the quality and quantity of equine drug tests administered and processed through MDA's Geagley Laboratory.

- Developed a partnership with the Michigan State Police resulting in increased collaboration, and a detective/sargeant being assigned full-time to the ORC to assist with the investigation activities of regulation agents.

- Partnered with tracks to establish a counseling program for racetrack employees.

- Licensed pari-mutuel tellers for the first time to continue improvements in the regulation of pari-mutuel wagering.

- Received a "Top Ten Newsmaker of the Year Award" from Crain's Detroit Business magazine recognizing a strong presence in the media.

- Promoted the horse racing industry with exhibits at the Michigan State Fair, Michigan State University Pavilion and Novi Expo Center.

- Partnered with the Michigan Department of Agriculture and the Michigan Harness Horsemen's Association to conduct the Inaugural Michigan Sire Stakes Million Dollar Night at Hazel Park Harness Raceway.

## Pesticide and Plant Pest Management Division

The Pesticide and Plant Pest Management Division (PPPMD) enforces the state's pesticide laws, as well as numerous agricultural laws and regulations designed to protect Michigan consumers, the environment, and Michigan's agricultural industries. In cooperation with U.S. Environmental Protection Agency (EPA), the division enforces laws and oversees programs designed to assure compliance with pesticide statutes and to protect human health and the environment from the potential risks associated with improper pesticide use. PPPMD also implements laws and regulations designed to certify nursery stock and other plant products for interstate shipment, and agricultural commodities for export. The division conducts proactive surveys and inspections designed to protect against invasive species that have the potential to impact Michigan. In addition, it also conducts inspections and certifies grades of fruits and vegetables, and ensures the safety and proper labeling of agricultural commodities such as animal feeds, seeds, fertilizer, and animal remedies in partnership with U.S. Department of Agriculture. During 2001, the division:

- Conducted numerous pesticide product and use-related inspections and investigations, including 194 pesticide use investigations, 48 of which occurred in agricultural situations; 180 planned use inspections, 110 of which occurred at commercial applicator facilities; 52 pesticide-producing establishment inspections; 21 federal marketplace inspections; 88 restricted use pesticide audits and 1,126 compliance monitoring contacts/inspections.

- Assisted Michigan growers by requesting emergency pesticide registrations, in accordance with Section 18 of the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), for pest control on crops where pesticides were not registered and significant crop loss was expected. EPA granted 20 emergency exemptions supporting a variety of Michigan commodities. Michigan ranks among the top 10 states in the nation in this area of producer assistance.

- Sampled and monitored five commodities, including blueberries, strawberries, grapes, raspberries, and carrots and cranberry bog water as part of the 2001 pesticide residue monitoring project. This data provides a critical link between actual pesticide use and resulting residues in raw commodities. This project initiated a review of new pesticide products emerging as safer alternatives and matched residue information on these new products to MSU research projects aimed at measuring pest control efficacy.

- Administered 14,975 examinations to individuals seeking pesticide applicator certification or registration credentials.

- Implemented the State Arbovirus Emergency Response Plan to deal with the detection of West Nile Virus (WNV) in Michigan in 2001. This plan also maintained a surveillance program looking for other arboviral diseases, including Eastern Equine Encephalitis, St. Louis encephalitis, and WNV.

- Prepared the final draft of amendments to Act 451, Part 83, Pesticide Control, which was introduced in the Senate as Senate Bill 989 in December, 2001. Significant changes include e-commerce regulatory authority for pesticide registration requirements, prohibitions for selling pesticides for off label uses, and felony provisions for illegal use of pesticides with intent to cause harm to human health or the environment.

- Prepared final drafts of Regulation 636, Pesticide Applicators, and held a public hearing in December, 2001. Significant changes add two new categories for certification of applicators performing pest control on domestic animals and treating sewers for invading tree roots.

- Performed approximately 10,616 shipping point inspections on 97,000 tons of produce prior to shipment from Michigan packinghouses in 2001. Staff also conducting 1,240 inspections on 11,000 tons of produce at Michigan markets, and 21,681 processor inspections, applying USDA grades to 200,000 tons of produce destined for processing in Michigan.

- Began implementation of the Michigan Organic Products Act, which became effective October 1, 2001. Under the existing federal law and new national standards, any state with an organic program is required to apply to USDA for approval of the new state program.

- Conducted 630 inspections of commercial feeds and the processes involved in their production, distribution, and storage. Inspection staff discovered 577 feed law violations, which resulted in the removal of $301,537 worth of feed from distribution.

- Conducted 195 medicated livestock feed inspections at 118 of the approximately 290 feed mills in the state.

- Worked in cooperation with state agencies and stakeholders to advise agricultural dealers and farmers on how they can help deter illicit use of anhydrous ammonia, a key ingredient in the illegal production of methamphetamine, while protecting its safe, intended use.

- Inspected and registered over 240 businesses storing bulk liquid agricultural chemicals, to help prevent the possible contamination of Michigan's natural resources by agri-chemicals.

- Provided cost-share and technical support to 21 farms across the state in constructing secondary containment facilities around already existing on-farm bulk liquid fertilizer tanks. These demonstration sites are being used for educational purposes to illustrate a variety of fertilizer containment operations for sound on-farm storage.

- Collected approximately 1,460 seed samples, including approximately 467 lawn/turf and mixed pasture, 71 flower and vegetable seed, and 922 field or agricultural seed. MDA inspectors also issued 544 violation notices and removed over $1.6 million worth of violative seed products from the channels of trade.

- Collected samples from 10,250 acres of seed corn for testing for several diseases to meet phytosanitary requirements for exports.

- Inspected nearly 14,000 acres of nursery stock and perennials produced by 2,165 licensed growers through the division's nursery program in support of an industry with estimated annual sales exceeding $710 million.

- Surveyed nurseries in 31 counties to facilitate movement of nursery stock and other agricultural products from Michigan.

- Inspected 17,680 acres of Christmas trees, a crop valued at over $38 million, for compliance with federal gypsy moth and pine shoot beetle quarantines.

- Issued over 2,000 phytosanitary certificates for interstate and international shipment of commodities, providing continued access to interstate and world markets for Michigan growers. Michigan commodities were shipped to nearly 70 countries worldwide in 2001.

- Coordinated a statewide response to the presence of gypsy moth in Michigan through suppression activities, an educational component, biological control efforts and a "Slow the Spread" project. Program efforts resulted in the protection of an estimated 6,700 residents and 55,000 people visiting Michigan's recreational areas, and

encompassed six counties and nearly 6,000 acres in Michigan Lower Peninsula.

- Conducted specific detection surveys at 432 nursery and warehouse locations to assure freedom from Asian long-horned beetle (ALB). All locations inspected were negative for ALB.

- Inspected 233 locations statewide for Hemlock Woolly Adelgid (HWA). All locations were found negative for this pest. MDA established a HWA Exterior Quarantine to regulate the movement of Hemlock from HWA-infested states into Michigan.

- Collected and tested a total of 46,322 laboratory samples in 2001 for Plum Pox Virus (PPV). Samples collected were comprised of peach, plum, apricot, and nectarine leaf samples from 1,798 acres belonging to 144 growers located in 27 counties. All samples were negative for PPV.

## Technology Services Division

To keep pace with the changing e-commerce world and meet the department's technological needs, MDA divided the former Finance and Technology Division into two divisions, Technology Services Division (TSD) and Finance and Administrative Services Division. TSD develops and deploys new technology throughout the department, allowing program areas to focus more time and attention on their primary responsibilities. TSD also provides technical support on computer and software related problems, and maintains the department's network servers. In 2001, TSD:

- Carried out department-wide upgrades of desktop software to enhance productivity and protect computer data.

- In support of the department's move to Constitution Hall, planned and successfully enacted the move of desktops and network servers to Constitution Hall. In addition, TSD planned, ordered, outfitted and installed a new server room, computer setup room, and training room at Constitution Hall.

- Initiated and worked with an approved vendor to implement the License 2000 project including setting up the software and server, creating a database, training users and conducting acceptance testing. License 2000 creates a central database to hold information and facilitate applications and renewals for the department's licensing programs.

- Participated in activities to revise and update the Information Technology Strategic Plan.

- Upgraded several data communication links to the regional offices, increasing data transfer rates and enhancing productivity.

- Worked with staff from e-Michigan to prepare and design the MDA Internet web site for migration to the Vignette application and www.Michigan.gov.

- Staffed a department-wide help desk that assisted employees in solving over 1,000 computer-related problems.

## Conclusion

As you can see, the Michigan Department of Agriculture plays an extensive role in the daily lives of Michigan residents. The administration and staff of MDA respectfully submit this report to the citizens of Michigan. We hope you find it informative and helpful.

For more information about the Michigan Department of Agriculture, please contact us:

**Phone:** 517-373-1104 or 800-292-3939

**Fax:** 517-335-7071

**Mail:** P.O Box 30017, Lansing, MI 48909

**Web:** www.michigan.gov/mda

**E-mail:** mdainfo@michigan.gov

# Part II:

# Michigan Agricultural Statistics 2001-2002

## Office Staff

Marian Baker
Denise Bowman
Sam Bruner
Charles Butler
Chad Cloos
Neva Coleman
James Collom
Nathan Elias
Diane Hutchins
Adrienne Jones
Lisa Jones
Gene Kenyon
Gary Keough
Dan Ledbury
Ed Molenda
Julie Palmer
Elena Romaniello
Marty Saffell
Lynn Spisak
Linda Stoneman

National Association of State Departments of Agriculture

National Association of State Departments of Agriculture (NASDA) enumerators collect data for the Michigan Agricultural Statistics Service. NASDA workers who gathered information for this publication were:

## Office Telephone Enumerators

Flo Hill, *Day Supervisor*
Vena Hutton, *Night Supervisor*
Rosa Davis
Julie Everett
Olive Goedert
Carol Griffiths
Ebony Hosey
Debra Jones
Virginia Ludlow
Sharyn McIntyre
Mike McManus
Neva Miller
Jane Mosier
Linda Newcomb
Jackie Perkins
Paula Scott
Delores Tabor

## Field Enumerators

### West Central Michigan

Carl DeKleine, *Supervisor*, Grand Haven
Doris Bastian, Grand Haven
Babette Burmeister, Shelby
Bryon Carpenter, Grand Haven
Bill Dukes, Shelby
Beverly Eitniear, Hart
Sharon Martin, Shelby
Albert TerHaar, Hudsonville
Bev Vincent, Grand Haven

### Southwest Michigan

Cindra Mikel, *Supervisor*, Cassopolis
Margaret Glidden, Paw Paw
Steve Lamberton, Niles
Joyce Landis, Homer
Bob Larsen, Coloma
Rosie Nimtz, Eau Claire
Don Trull, Buchanan
LaVon Zelmer, Buchanan

### Southeast Michigan

Rachel Bakowski,*Supervisor*, Ottawa Lake
Kelly Ludwig, Osseo
Hugh Smith, Jackson

### North Michigan and Upper Peninsula

Herb Hemmes, *Supervisor*, Harbor Springs
Becky Bloom, Sparta
Cathy Collins, Traverse City
Jim Cranick, Harbor Springs
Dan Dansby, Bear Lake
Brad Doublestein, Omena
Ed Giddings, Eastport
Ila Howe, Baldwin
Carol McAllister, Suttons Bay
Gordon McDonald, Munising
Karen Regalado, Traverse City
Mark Scram, Kewadin
Russ Scram, Kewadin
Burt Stanley, Bellaire
Kitty Venable, Luzerne

### Central Michigan

Ken Kralik, *Supervisor*, Riverdale
Pat Bitler, Hersey
Ron Feher Sr., Lansing
Mary Hubbard, Riverdale

### East Central Michigan

Mona Kaczuk, *Supervisor*, Bad Axe
M. Keith Corlew, Davison
Debra Delcourt, Emmett
Diane McPhee, Kinde
Jim Sparks, Fenton

**Michigan Agricultural Statistics Service**

P.O. Box 26248
Lansing, Michigan 48909-6248

Telephone: (517) 324-5300
Facsimile: (517) 324-5299
e-mail: NASS-MI@nass.usda.gov
http://www.nass.usda.gov/mi

**Rank in U.S. agriculture by selected commodities, 2001**

| Rank | Item | Unit | Quantity | Percent of U.S. | Leading state |
|---|---|---|---|---|---|
| | | | *Thousands* | *Percent* | |
| **1** | Beans, dry, black | Cwt | 335 | 42.7 | Michigan |
| | Beans, dry, cranberry | Cwt | 70 | 45.8 | Michigan |
| | Blueberries | Pounds | 77,000 | 38.4 | Michigan |
| | Cherries, tart | Pounds | 297,000 | 80.4 | Michigan |
| | Cucumbers (processing) | Tons | 156 | 26.4 | Michigan |
| | Flowering hanging baskets | Number | 3,198 | 9.1 | Michigan |
| | Geraniums (seed and cuttings) | Pots | 20,160 | 19.3 | Michigan |
| | Hosta | Pots | 1,703 | 14.9 | Michigan |
| | Impatiens | Flats | 2,463 | 15.8 | Michigan |
| **2** | Celery | Cwt | 840 | 4.5 | California |
| | Marigolds | Flats | 794 | 12.5 | California |
| | Other potted perennials | Pots | 19,317 | 12.4 | California |
| | Petunias | Flats | 1,486 | 12.5 | California |
| **3** | Apples | Pounds | 880,000 | 9.1 | Washington |
| | Asparagus | Cwt | 287 | 13.8 | California |
| | Beans, dry, small red | Cwt | 27 | 15.7 | Idaho |
| | Beans, dry, navy | Cwt | 170 | 7.4 | North Dakota |
| | Beans, snap (processing) | Tons | 59.5 | 8.5 | Wisconsin |
| | Carrots (fresh market) | Cwt | 1,386 | 4.4 | California |
| | Grapes, Niagara | Tons | 7. | 16.3 | Washington |
| | Squash | Cwt | 1,100 | 14.2 | California |
| | Vegetable type bedding plants | Number | 567 | 6.6 | California |
| **4** | Cucumbers (fresh market) | Cwt | 1,298 | 11.9 | Florida |
| | Cherries, sweet | Tons | 23.0 | 10.5 | Washington |
| | Grapes, Concord | Tons | 19.0 | 5.4 | Washington |
| | Plums | Tons | 3.6 | 1.7 | California |
| | Sugarbeets | Tons | 3,220 | 12.5 | Minnesota |
| | Tomatoes (processing) | Tons | 87.0 | 0.9 | California |
| **6** | Beans, dry, dark red kidney | Cwt | 30 | 4.0 | Minnesota |
| | Beans, dry, light red kidney | Cwt | 85 | 10.0 | Nebraska |
| | Carrots (processing) | Tons | 32.5 | 7.4 | Washington |
| | Pumpkins | Cwt | 576 | 6.9 | Illinois |
| **7** | Beans, dry, all | Cwt | 780 | 4.0 | North Dakota |
| | Maple syrup | Gallons | 60 | 5.7 | Vermont |
| | Milk | Pounds | 5,855,000 | 3.5 | California |
| **9** | Grapes, all | Tons | 28.9 | 0.4 | California |
| | Potatoes | Cwt | 13,950 | 3.1 | Idaho |
| **11** | Corn, for grain | Bushels | 199,500 | 2.0 | Iowa |
| **12** | Soybeans | Bushels | 63,900 | 2.2 | Illinois |
| **13** | Hogs, as of Dec. 1 | Head | 960 | 1.6 | Iowa |
| **14** | Wheat, winter | Bushels | 35,840 | 2.6 | Kansas |
| **17** | Hay, all | Tons | 3,790 | 2.4 | Texas |
| **24** | Cash receipts | Dollars | 3,469,122 | 1.7 | California |
| **31** | Cattle, as of Jan. 1 | Head | 990 | 1.0 | Texas |

**Number of farms and land in farms by economic sales class, 1997-2001 [1]**

| Year | Economic sales class | | | Total | Average size of farm |
|---|---|---|---|---|---|
| | $1,000-$9,999 | $10,000-$99,999 | $100,000 and over | | |
| | *1,000 farms* | *1,000 farms* | *1,000 farms* | *1,000 farms* | |
| 1997 | 28.5 | 17.0 | 7.5 | 53.0 | |
| 1998 | 27.0 | 17.0 | 8.0 | 52.0 | |
| 1999 | 28.5 | 16.5 | 8.0 | 53.0 | |
| 2000 | 27.5 | 16.5 | 8.0 | 52.0 | |
| 2001 | 28.5 | 15.5 | 8.0 | 52.0 | |
| | *1,000 acres* | *1,000 acres* | *1,000 acres* | *1,000 acres* | *Acres* |
| 1997 | 2.0 | 2.9 | 5.5 | 10.4 | 196 |
| 1998 | 1.9 | 2.8 | 5.7 | 10.4 | 200 |
| 1999 | 1.9 | 2.8 | 5.7 | 10.4 | 196 |
| 2000 | 1.9 | 2.8 | 5.7 | 10.4 | 200 |
| 2001 | 1.8 | 2.7 | 5.9 | 10.4 | 200 |

[1] USDA estimates of farm number and land in farms are based on the definition "a farm is any establishment from which $1,000 or more of agricultural products were sold or would normally be sold during the year."

**Farm real estate: Values and cash rents, 1998-2002**

| Year | Farm real estate average value per acre | Cropland | |
|---|---|---|---|
| | | Average value per acre | Average cash rent per acre |
| | *Dollars* | *Dollars* | *Dollars* |
| 1998 | 1,670 | 1,480 | 60 |
| 1999 | 1,850 | 1,670 | 60 |
| 2000 | 2,150 | 2,000 | 60 |
| 2001 | 2,300 | 2,100 | 60 |
| 2002 | 2,500 | 2,300 | 60 |

# Farm Income

Net farm income in 2001 fell 39 percent to $191 million. That was despite $353 million of government payments. The total agriculture output was $3.92 billion dollars, up 3.5 percent from 2000. Production expenses were $4.07 billion in 2001, up 5.8 percent from the previous year.

Preliminary cash receipts from 2001 marketings of Michigan crops, livestock and livestock products totaled $3.47 billion, up 4.4 percent from 2000. Michigan ranked 24th nationally in total cash receipts.

Crop receipts, $1.98 billion, were nearly unchanged from 2000. A decline in the market value of dry beans and soybeans was offset by increases in corn and wheat marketings. Livestock cash receipts were up 11.7 percent from a year earlier to $1.49 billion. Increases in milk receipts and value of sales of poultry more than offset declines cattle values.

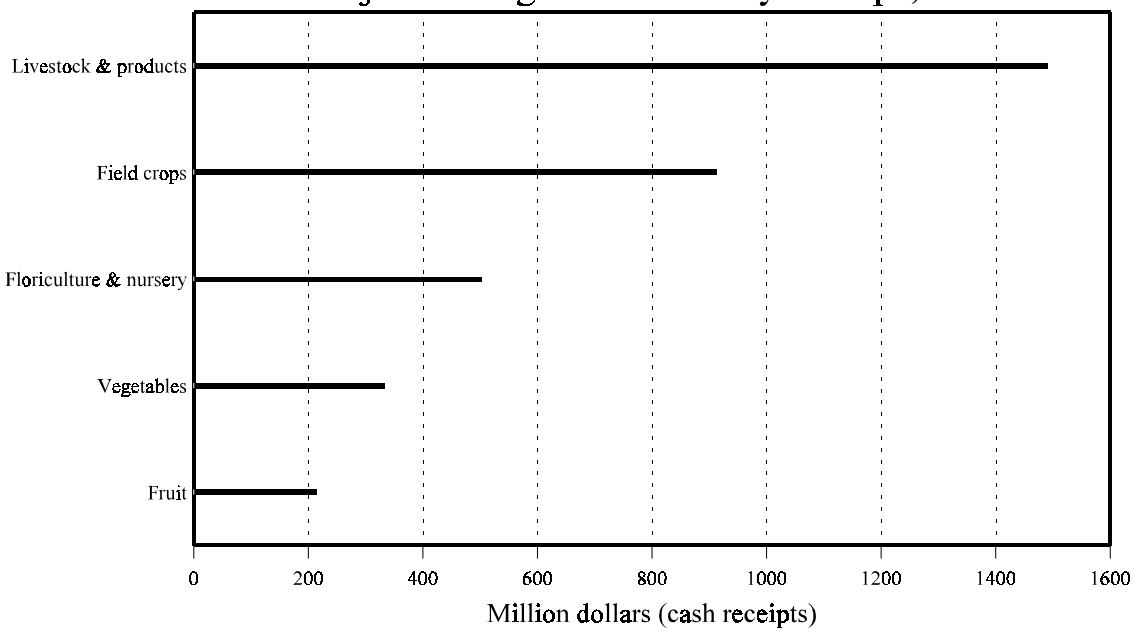
In 2001, the top ten Michigan commodities ranked by cash receipts were: milk, corn, soybeans, cattle and calves, hogs, woody ornamentals, annual bedding plants, sugarbeets, potatoes, and wheat.

**Government payments, 1997-2001 [1]**

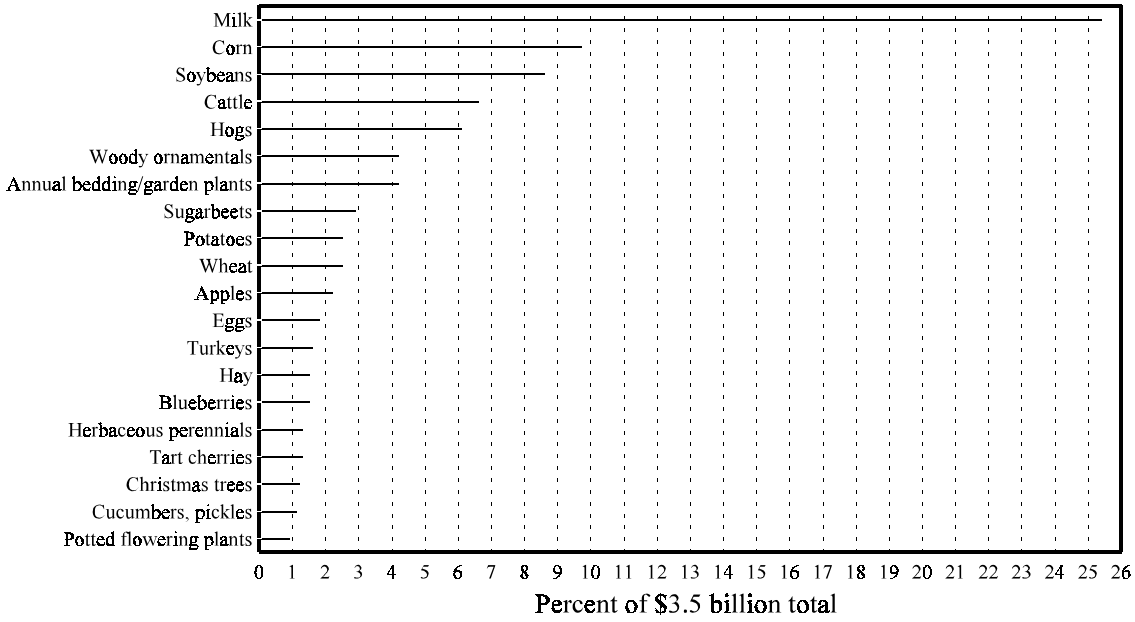
| Program | 1997 | 1998 | 1999 | 2000 | 2001 |
|---|---|---|---|---|---|
| | *1,000 dollars* | *1,000 dollars* | *1,000 dollars* | *1,000 dollars* | *1,000 dollars* |
| Conservation programs | 20,854 | 17,488 | 16,893 | 16,842 | 21,335 |
| Production flexibility contract payments | NA | 100,556 | 87,116 | 87,564 | 68,405 |
| Loan deficiency payments | NA | 38,577 | 131,482 | 112,565 | 101,666 |
| Miscellaneous programs | [2] 100,433 | [3] 51,755 | 10,569 | 17,713 | 17,962 |
| Supplemental Funding | NA | NA | [4] 143,076 | 146,372 | 143,398 |
| Total | 121,287 | 208,077 | 389,099 | 381,056 | 352,766 |

[1] Source: U.S. Department of Agriculture, Economic Research Service
[2] Programs included are CAT, Disaster, Loan Deficiency, NAP, and Production Flexibility, and repayments by farmers.
[3] No longer includes Loan Deficiency and Production Flexibility payments.
[4] Provided by the Omnibus Supplemental Appropriations, Act of 1999 & Emergency Assistance Provisions of Agriculture Appropriation 2000.

## Major Michigan Commodity Groups, 2001




## Top 20 Commodities in Cash Receipts



**Value added to the economy by the Michigan agricultural sector 1997-2001 [1]**

| Item [2] | 1997 | 1998 | 1999 | 2000 | 2001 |
|---|---|---|---|---|---|
| | *Million dollars* | *Million dollars* | *Million dollars* | *Million dollars* | *Million dollars* |
| Final crop output | 2,373.4 | 2,135.3 | 2,268.5 | 1,990.8 | 1,874.4 |
| Food grains | 104.5 | 67.7 | 71.5 | 78.8 | 86.0 |
| Feed crops | 494.3 | 418.5 | 369.5 | 351.8 | 393.6 |
| Oil crops | 406.4 | 412.8 | 312.2 | 329.9 | 299.4 |
| Fruits and tree nuts | 240.1 | 217.2 | 244.3 | 236.6 | 214.0 |
| Vegetables, potatoes, dry beans | 380.3 | 429.3 | 452.0 | 396.1 | 359.5 |
| All other crops | 633.2 | 635.1 | 683.2 | 594.5 | 627.4 |
| Home consumption | 3.6 | 3.6 | 3.8 | 3.6 | 3.7 |
| Value of inventory adjustment [3] | 110.9 | -49.0 | 132.0 | -0.7 | -109.1 |
| Final animal output | 1,319.1 | 1,335.1 | 1,299.0 | 1,317.7 | 1,509.3 |
| Meat animals | 450.2 | 338.2 | 387.9 | 458.6 | 441.7 |
| Dairy products | 732.1 | 814.0 | 801.4 | 729.5 | 881.6 |
| Poultry and eggs | 133.6 | 119.2 | 90.9 | 98.7 | 119.2 |
| Miscellaneous livestock | 47.4 | 48.6 | 47.6 | 47.1 | 46.8 |
| Home consumption | 9.9 | 9.3 | 9.7 | 11.3 | 9.6 |
| Value of inventory adjustment [3] | -54.1 | 5.8 | -38.5 | -27.4 | 10.4 |
| Services and forestry | 422.8 | 440.5 | 478.5 | 478.0 | 533.8 |
| Machine hire and custom work | 34.9 | 49.7 | 37.9 | 30.0 | 55.7 |
| Forest products sold | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 |
| Other farm income | 96.2 | 88.4 | 92.6 | 92.8 | 128.4 |
| Gross imputed rental value-farm dwellings | 281.7 | 292.5 | 338.1 | 345.2 | 339.7 |
| Final agricultural sector output | 4,115.4 | 3,910.9 | 4,046.0 | 3,786.5 | 3,917.5 |
| **less:** Purchased inputs | 2,300.1 | 2,194.9 | 2,154.1 | 2,205.6 | 2,421.0 |
| Farm origin | 690.2 | 657.3 | 620.7 | 641.9 | 717.9 |
| Feed purchased | 422.9 | 373.8 | 327.3 | 322.1 | 378.5 |
| Livestock and poultry purchased | 41.0 | 39.2 | 44.1 | 56.7 | 56.1 |
| Seed purchased | 226.3 | 244.4 | 249.4 | 263.2 | 283.2 |
| Manufactured inputs | 714.3 | 663.9 | 635.7 | 686.9 | 697.4 |
| Fertilizers and lime | 281.6 | 249.9 | 235.2 | 243.5 | 255.9 |
| Pesticides | 228.7 | 228.7 | 217.9 | 225.1 | 211.8 |
| Petroleum fuel and oils | 145.5 | 128.7 | 124.3 | 160.4 | 166.9 |
| Electricity | 58.5 | 56.6 | 58.3 | 58.0 | 62.8 |
| Other intermediate expenses | 895.6 | 873.7 | 897.7 | 876.8 | 1,005.7 |
| Repair and maintenance of capital items | 302.7 | 308.1 | 297.8 | 273.7 | 378.8 |
| Machine hire and custom work | 68.3 | 77.5 | 72.5 | 75.6 | 118.2 |
| Marketing, storage, and transportation ex | 116.8 | 93.0 | 113.2 | 121.8 | 92.5 |
| Contract labor | 15.2 | 21.6 | 16.0 | 14.0 | 22.6 |
| Miscellaneous expenses | 392.6 | 373.4 | 398.3 | 391.5 | 393.5 |
| **plus:** Net government transactions | -138.6 | -28.2 | 180.3 | 151.4 | 124.3 |
| **plus:** Direct Government payments | 121.3 | 210.6 | 401.4 | 381.1 | 352.8 |
| **less:** Motor vehicle registration and licens | 11.8 | 10.5 | 9.3 | 8.6 | 9.8 |
| **less:** Property taxes | 248.1 | 228.3 | 211.8 | 221.0 | 218.7 |
| Gross value added | 1,676.7 | 1,687.8 | 2,072.2 | 1,732.3 | 1,620.7 |
| **less:** Capital consumption | 534.2 | 543.3 | 570.6 | 581.1 | 588.5 |
| Net value added | 1,142.5 | 1,144.5 | 1,501.7 | 1,151.1 | 1,032.2 |
| **less:** Payments to stakeholders | 743.4 | 788.1 | 773.2 | 837.3 | 841.6 |
| Employee compensation (total hired labor) | 473.9 | 511.0 | 496.5 | 567.4 | 554.8 |
| Net rent received by nonoperator landlords | 19.6 | 22.3 | 23.6 | 6.5 | 28.9 |
| Real estate and nonreal estate interest | 249.9 | 254.8 | 253.1 | 263.4 | 257.9 |
| **Net farm income** | 399.1 | 356.5 | 728.5 | 313.8 | 190.6 |

[1] Source: U.S. Department of Agriculture, Economic Research Service.

[2] Final sector output is the gross value of the commodities and services produced withing a year. Net value-added is the sector's contribution to the National economy and is the sum of the income from production earned by all factors-of-production. Net farm income is the farm operator's share of income from the sector's production activities. The concept presented is consistent with that employed by the Organization for Economic Cooperation and Development.

[3] A positive value of inventory change represents current-year production not sold by December 1. A negative value is an offset to production from prior years included in current-year sales.

## Cash receipts by commodity groups and selected commodities 1997-2001 [1]

| Item | 1997 | 1998 | 1999 | 2000 | 2001 |
|---|---|---|---|---|---|
| | *1,000 dollars* | *1,000 dollars* | *1,000 dollars* | *1,000 dollars* | *1,000 dollars* |
| **Total cash receipts** | 3,622,314 | 3,500,694 | 3,460,596 | 3,321,666 | 3,469,122 |
| **Total livestock and products** | 1,363,391 | 1,320,034 | 1,327,853 | 1,333,868 | 1,489,323 |
| Meat animals | 450,206 | 338,236 | 387,877 | 458,574 | 441,708 |
| Cattle and calves | 230,906 | 196,656 | 235,829 | 255,892 | 227,930 |
| Hogs | 213,722 | 138,347 | 149,937 | 200,485 | 211,337 |
| Sheep and lambs | 5,578 | 3,233 | 2,111 | 2,197 | 2,441 |
| Dairy (milk) | 732,135 | 813,960 | 801,420 | 729,495 | 881,600 |
| Poultry and eggs | 133,647 | 119,233 | 90,914 | 98,739 | 119,207 |
| Eggs | 61,927 | 57,639 | 53,655 | 56,739 | 61,063 |
| Turkeys | | | 35,092 | 40,460 | 56,700 |
| Other | 71,720 | 61,594 | 2,167 | 1,540 | 1,444 |
| Miscellaneous livestock | 47,403 | 48,605 | 47,642 | 47,060 | 46,808 |
| Honey | 4,582 | 4,488 | 4,095 | 3,240 | 3,557 |
| Mink pelts | 2,012 | 1,854 | 1,339 | 1,719 | 1,445 |
| Trout | 1,486 | 1,151 | 1,113 | 1,037 | 823 |
| Other | 39,323 | 41,112 | 41,095 | 41,064 | 40,983 |
| **Total crops** | 2,258,923 | 2,180,660 | 2,132,743 | 1,987,798 | 1,979,799 |
| Field crops | 1,212,258 | 1,107,227 | 1,009,735 | 941,203 | 911,477 |
| Corn | 429,042 | 380,769 | 328,897 | 303,174 | 337,778 |
| Dry beans | 85,489 | 101,836 | 135,567 | 68,585 | 27,464 |
| Hay | 59,659 | 32,468 | 35,272 | 45,379 | 52,138 |
| Soybeans | 405,792 | 412,373 | 311,866 | 329,579 | 298,985 |
| Sugarbeets | 117,040 | 101,586 | 115,915 | 106,514 | 100,786 |
| Wheat | 104,098 | 67,293 | 70,789 | 78,081 | 85,372 |
| Other | 11,138 | 10,902 | 11,429 | 9,891 | 8,954 |
| Vegetables | 294,860 | 327,465 | 316,420 | 327,519 | 331,987 |
| Asparagus | 17,792 | 17,320 | 18,822 | 18,075 | 12,369 |
| Beans, snap | 15,597 | 21,659 | 19,493 | 16,778 | 11,904 |
| Carrots | 18,903 | 19,281 | 16,717 | 19,292 | 21,370 |
| Celery | 14,358 | 13,327 | 11,005 | 13,421 | 12,741 |
| Corn, sweet | 17,408 | 12,900 | 13,282 | 13,430 | 15,450 |
| Cucumbers, fresh | 18,048 | 21,366 | 22,506 | 25,192 | 24,662 |
| Cucumbers, pickles | 20,550 | 21,970 | 26,076 | 38,700 | 38,376 |
| Onions | 11,170 | 10,077 | 8,900 | 8,371 | 10,235 |
| Peppers, green, fresh | 7,817 | 8,640 | 9,600 | 10,395 | 11,466 |
| Potatoes | 69,505 | 82,603 | 82,258 | 88,358 | 86,612 |
| Pumpkins | 9,680 | 18,596 | 16,549 | 18,115 | 18,480 |
| Squash | 9,771 | 7,560 | 7,308 | 6,804 | 6,960 |
| Tomatoes, fresh | | | | 8,448 | 8,064 |
| Tomatoes, processing | | | | 9,333 | 16,500 |
| Other | 64,261 | 72,166 | 63,904 | 32,807 | 36,798 |
| Fruit | 240,134 | 217,243 | 244,342 | 236,595 | 214,032 |
| Apples | 92,192 | 93,808 | 96,516 | 90,146 | 77,257 |
| Blueberries | 50,042 | 30,260 | 54,660 | 55,140 | 51,315 |
| Grapes | 17,873 | 19,820 | 21,083 | 24,156 | 8,926 |
| Peaches | 14,450 | 11,546 | 5,440 | 11,340 | 12,503 |
| Strawberries | 7,411 | 7,089 | 6,412 | 6,145 | 5,482 |
| Sweet cherries | 19,986 | 18,551 | 14,149 | 9,520 | 11,092 |
| Tart cherries | 34,380 | 32,162 | 42,134 | 36,370 | 43,460 |
| Other | 3,800 | 4,007 | 3,948 | 3,778 | 3,997 |
| Miscellaneous crops | 22,287 | 20,281 | 19,307 | 20,529 | 21,193 |
| Floriculture and nursery | 489,384 | 508,444 | 542,939 | 461,952 | 501,110 |

[1] Source: U.S. Department of Agriculture, Economic Research Service.

**Corn production costs and returns, excluding direct Government payments, 1999-2000**

| Item | United States | | Northern Crescent [1] | |
|---|---|---|---|---|
| | 1999 | 2000 | 1999 | 2000 |
| | *Dollars per planted acre* | *Dollars per planted acre* | *Dollars per planted acre* | *Dollars per planted acre* |
| Gross value of production: (excluding direct Government payments): | | | | |
| Primary product: Corn grain | 228.15 | 244.26 | 209.56 | 230.21 |
| Secondary product: Corn silage | 2.55 | 2.41 | 11.99 | 10.80 |
| Total, gross value of production | 230.70 | 246.67 | 221.55 | 241.01 |
| Operating costs: | | | | |
| Seed | 30.29 | 30.02 | 28.54 | 28.96 |
| Fertilizer, lime, and gypsum | 38.75 | 39.04 | 34.23 | 34.49 |
| Soil conditioners | 0.17 | 0.16 | 0.53 | 0.46 |
| Manure | 0.49 | 0.48 | 1.76 | 1.77 |
| Chemicals | 28.40 | 28.82 | 27.20 | 27.64 |
| Custom operations [2] | 11.37 | 11.48 | 9.97 | 9.84 |
| Fuel, lube, and electricity | 23.04 | 29.12 | 20.64 | 26.72 |
| Repairs | 17.17 | 17.55 | 16.72 | 17.42 |
| Other variable cash expenses [3] | 0.31 | 0.31 | 0.00 | 0.00 |
| Interest on operating capital | 3.50 | 4.53 | 3.25 | 4.25 |
| Total, operating costs | 153.49 | 161.51 | 142.84 | 151.55 |
| Allocated overhead: | | | | |
| Hired labor | 3.28 | 3.36 | 4.55 | 4.92 |
| Opportunity cost of unpaid labor | 31.43 | 32.21 | 37.94 | 39.27 |
| Capital recovery of machinery and equipment | 68.49 | 70.16 | 69.86 | 72.87 |
| Opportunity cost of land (rental rate) | 86.77 | 89.36 | 65.48 | 66.80 |
| Taxes and insurance | 6.96 | 7.13 | 6.38 | 6.62 |
| General farm overhead | 10.88 | 11.11 | 13.57 | 13.96 |
| Total, allocated overhead | 207.81 | 213.33 | 197.78 | 204.44 |
| Total, costs listed | 361.30 | 374.84 | 340.62 | 355.99 |
| Value of production less total costs listed | -130.60 | -128.17 | -119.07 | -114.98 |
| Value of production less operating costs | 77.21 | 85.16 | 78.71 | 89.46 |
| Supporting information: | | | | |
| Yield (bushels per planted acre) | 135 | 138 | 124 | 127 |
| Price (dollars per bushel at harvest) | 1.69 | 1.77 | 1.69 | 1.81 |
| Enterprise size (planted acres) [4] | 189 | 189 | 113 | 113 |
| Production practices: [4] | | | | |
| Irrigated (percent) | 15 | 15 | 2 | 2 |
| Dryland (percent) | 85 | 85 | 98 | 98 |

[1] Includes NE Minnesota, Wisconsin, Michigan, NE Ohio, Pennsylvania, New York, and New England.
[2] Cost of custom operations, technical services and commercial drying.
[3] Cost of purchased irrigation water.
[4] For 1996 survey base year only.

**Livestock and products: Marketing year average prices received by farmers, 1997-2001**

| Marketing year | All hogs per cwt | All beef per cwt [1] | Cows per cwt [2] | Steers and heifers per cwt | Milk cows per head [3] | Calves per cwt | Market eggs per dozen | All milk wholesale per cwt | Turkeys per pound [4] |
|---|---|---|---|---|---|---|---|---|---|
| | *Dollars* | *Dollars* | *Dollars* | *Dollars* | *Dollars* | *Dollars* | *Dollars* | *Dollars* | *Dollars* |
| 1997 | 53.10 | 50.80 | 35.80 | 60.60 | 1,090 | 54.00 | 0.560 | 13.60 | |
| 1998 | 33.90 | 47.70 | 34.40 | 55.40 | 1,130 | 51.70 | 0.496 | 15.30 | |
| 1999 | 29.80 | 50.50 | 35.30 | 58.70 | 1,310 | 68.90 | 0.420 | 14.80 | 0.41 |
| 2000 | 40.70 | 56.00 | 38.10 | 63.60 | 1,350 | 102.00 | 0.419 | 12.90 | 0.34 |
| 2001 | 41.70 | 58.80 | 41.70 | 66.10 | 1,460 | 109.00 | 0.437 | 15.20 | 0.35 |

[1] Combined price for "Cows" and "Steers and Heifers."
[2] Beef cows and cull dairy cows sold for slaughter.
[3] Sold for dairy herd replacement only. Prices published January, April, July, and October.
[4] Data not available prior to 1999.

**Livestock and products: Monthly prices received by farmers, 2001-2002**

| 2000-2001 Marketing years | All hogs per cwt | Beef cattle per cwt [1] | Cows per cwt [2] | Steers and heifers per cwt | Milk cows per head [3] | Calves per cwt | Market eggs per dozen | All milk wholesale per cwt |
|---|---|---|---|---|---|---|---|---|
| | *Dollars* | *Dollars* | *Dollars* | *Dollars* | *Dollars* | *Dollars* | *Dollars* | *Dollars* |
| 2000 | | | | | | | | |
| December | 38.10 | | | | | | 0.710 | |
| 2001 | | | | | | | | |
| January | 36.80 | 57.80 | 37.50 | 66.50 | 1,200 | 102.00 | 0.460 | 13.90 |
| February | 38.30 | 61.10 | 42.50 | 69.00 | | 118.00 | 0.450 | 13.20 |
| March | 44.00 | 61.20 | 43.00 | 69.00 | | 122.00 | 0.540 | 14.00 |
| April | 45.40 | 63.40 | 44.50 | 71.50 | 1,400 | 128.00 | 0.500 | 14.60 |
| May | 47.20 | 63.20 | 45.00 | 71.00 | | 115.00 | 0.320 | 15.40 |
| June | 49.30 | 63.60 | 45.00 | 71.50 | | 115.00 | 0.320 | 16.20 |
| July | 48.40 | 61.50 | 44.00 | 69.00 | 1,600 | 110.00 | 0.310 | 16.40 |
| August | 46.40 | 60.10 | 44.00 | 67.00 | | 110.00 | 0.370 | 16.60 |
| September | 41.90 | 57.10 | 41.00 | 64.00 | | 105.00 | 0.360 | 17.20 |
| October | 34.70 | 54.70 | 40.00 | 61.00 | 1,650 | 100.00 | 0.400 | 16.60 |
| November | 32.40 | 53.20 | 39.50 | 59.00 | | 95.00 | 0.480 | 14.80 |
| December | | 52.70 | 38.00 | 59.00 | | 95.00 | | 13.50 |
| 2001 | | | | | | | | |
| December | 31.30 | | | | | | 0.420 | |
| 2002 | | | | | | | | |
| January | 35.20 | 54.90 | 40.50 | 61.00 | 1,550 | 105.00 | 0.460 | 13.70 |
| February | 36.70 | 56.90 | 42.50 | 63.00 | | 110.00 | 0.370 | 13.30 |
| March | 34.40 | 57.70 | 43.00 | 64.00 | | 110.00 | 0.570 | 12.60 |
| April | 28.50 | 55.70 | 41.00 | 62.00 | 1,650 | 109.00 | 0.280 | 12.50 |
| May | 30.80 | 55.90 | 41.50 | 62.00 | | 110.00 | 0.240 | 12.20 |
| June | 32.10 | 55.20 | 41.50 | 61.00 | | 108.00 | 0.420 | 11.50 |
| July [4] | 33.80 | 53.60 | 41.00 | 59.00 | 1,600 | 105.00 | 0.350 | 11.00 |
| August | | | | | | | | |
| September | | | | | | | | |
| October | | | | | | | | |
| November | | | | | | | | |
| December | | | | | | | | |

[1] Combined price for "Cows" and "Steers and Heifers."
[2] Beef cows and cull dairy cows sold for slaughter.
[3] Sold for dairy herd replacement only. Prices published January, April, July, and October.
[4] Preliminary prices.

**Dry edible beans: Percent of sales by month, 1996-2001**

| Month | 1996-97 | 1997-98 | 1998-99 | 1999-00 | 2000-01 |
|---|---|---|---|---|---|
| | *Percent* | *Percent* | *Percent* | *Percent* | *Percent* |
| September | 6 | 5 | 30 | 49 | 10 |
| October | 32 | 16 | 12 | 17 | 23 |
| November | 8 | 11 | 6 | 3 | 14 |
| December | 6 | 16 | 10 | 3 | 28 |
| January | 15 | 11 | 20 | 3 | 10 |
| February | 6 | 10 | 5 | 1 | 4 |
| March | 3 | 6 | 3 | | 5 |
| April | 6 | 6 | 4 | 3 | 1 |
| May | 3 | 5 | 7 | 2 | 2 |
| June | 7 | 5 | 1 | 3 | 1 |
| July | 5 | 5 | 1 | 5 | 1 |
| August | 3 | 4 | 1 | 11 | 1 |

**Corn: Percent of sales by month, 1996-2001**

| Month | 1996-97 | 1997-98 | 1998-99 | 1999-00 | 2000-01 |
|---|---|---|---|---|---|
| | *Percent* | *Percent* | *Percent* | *Percent* | *Percent* |
| October | 5 | 5 | 16 | 20 | 9 |
| November | 22 | 20 | 14 | 19 | 14 |
| December | 12 | 19 | 14 | 8 | 12 |
| January | 15 | 16 | 12 | 15 | 12 |
| February | 9 | 9 | 6 | 4 | 7 |
| March | 6 | 7 | 8 | 7 | 7 |
| April | 5 | 5 | 3 | 4 | 6 |
| May | 3 | 5 | 4 | 4 | 4 |
| June | 5 | 4 | 5 | 4 | 5 |
| July | 6 | 3 | 5 | 4 | 11 |
| August | 6 | 3 | 9 | 6 | 7 |
| September | 6 | 4 | 4 | 5 | 6 |

**Hay: Percent of sales by month, 1996-2001**

| Month | 1996-97 | 1997-98 | 1998-99 | 1999-00 | 2000-01 |
|---|---|---|---|---|---|
| | *Percent* | *Percent* | *Percent* | *Percent* | *Percent* |
| June | 11 | 13 | 13 | 17 | 12 |
| July | 9 | 13 | 13 | 10 | 12 |
| August | 6 | 9 | 9 | 9 | 8 |
| September | 3 | 6 | 6 | 3 | 5 |
| October | 6 | 6 | 6 | 7 | 7 |
| November | 4 | 12 | 5 | 8 | 10 |
| December | 7 | 12 | 6 | 14 | 12 |
| January | 8 | 8 | 7 | 10 | 8 |
| February | 14 | 6 | 11 | 9 | 9 |
| March | 15 | 7 | 11 | 6 | 8 |
| April | 12 | 5 | 9 | 5 | 6 |
| May | 5 | 3 | 4 | 2 | 3 |

**Oats: Percent of sales by month, 1996-2001**

| Month | 1996-97 | 1997-98 | 1998-99 | 1999-00 | 2000-01 |
|---|---|---|---|---|---|
| | *Percent* | *Percent* | *Percent* | *Percent* | *Percent* |
| July | 11 | 7 | 23 | 17 | 9 |
| August | 33 | 39 | 25 | 35 | 37 |
| September | 10 | 7 | 9 | 11 | 6 |
| October | 4 | 2 | 3 | 7 | 3 |
| November | 1 | 2 | 2 | 1 | 4 |
| December | 2 | 2 | 2 | 4 | 4 |
| January | 3 | 1 | 4 | 2 | 9 |
| February | 6 | 4 | 7 | 3 | 8 |
| March | 5 | 11 | 2 | 6 | 4 |
| April | 5 | 15 | 5 | 3 | 3 |
| May | 5 | 4 | 9 | 3 | 4 |
| June | 15 | 6 | 9 | 8 | 9 |

**Soybeans: Percent of sales by month, 1996-2001**

| Month | 1996-97 | 1997-98 | 1998-99 | 1999-00 | 2000-01 |
|---|---|---|---|---|---|
| | *Percent* | *Percent* | *Percent* | *Percent* | *Percent* |
| September | 2 | 1 | 12 | 8 | 6 |
| October | 34 | 31 | 34 | 33 | 25 |
| November | 15 | 19 | 8 | 7 | 11 |
| December | 8 | 8 | 9 | 7 | 9 |
| January | 15 | 8 | 8 | 12 | 14 |
| February | 6 | 7 | 5 | 3 | 6 |
| March | 6 | 5 | 7 | 7 | 5 |
| April | 4 | 4 | 5 | 4 | 7 |
| May | 2 | 4 | 2 | 3 | 8 |
| June | 1 | 5 | 4 | 4 | 5 |
| July | 4 | 4 | 3 | 4 | 3 |
| August | 3 | 4 | 3 | 8 | 1 |

**Wheat: Percent of sales by month, 1996-2001**

| Month | 1996-97 | 1997-98 | 1998-99 | 1999-00 | 2000-01 |
|---|---|---|---|---|---|
| | *Percent* | *Percent* | *Percent* | *Percent* | *Percent* |
| July | 27 | 20 | 30 | 42 | 32 |
| August | 39 | 27 | 12 | 18 | 15 |
| September | 8 | 7 | 21 | 2 | 12 |
| October | 3 | 3 | 4 | 2 | 6 |
| November | 1 | 25 | 3 | 1 | 1 |
| December | 3 | 3 | 6 | 1 | 3 |
| January | 7 | 3 | 5 | 12 | 11 |
| February | 3 | 5 | 3 | 2 | 6 |
| March | 4 | 2 | 6 | 12 | 5 |
| April | 4 | 2 | 3 | 3 | 5 |
| May | 1 | 2 | 3 | 2 | 2 |
| June | | 1 | 4 | 3 | 2 |

## Crops: Marketing year average prices received by farmers, 1997-2001 [1]

| Year | Corn per bushel | Winter wheat per bushel | Oats per bushel | Soybeans per bushel | Dry beans per cwt | Navy beans per cwt | Fall potatoes per cwt | All hay per ton | Alfalfa hay per ton |
|---|---|---|---|---|---|---|---|---|---|
| | *Dollars* | *Dollars* | *Dollars* | *Dollars* | *Dollars* | *Dollars* | *Dollars* | *Dollars* | *Dollars* |
| 1997 | 2.40 | 3.26 | 1.86 | 6.47 | 18.90 | NA | 6.45 | 86.00 | 103.00 |
| 1998 | 1.90 | 2.33 | 1.42 | 4.99 | 21.60 | NA | 6.70 | 89.00 | 90.00 |
| 1999 | 1.78 | 2.12 | 1.35 | 4.61 | 16.80 | NA | 6.80 | 69.00 | 72.00 |
| 2000 | 1.90 | 2.11 | 1.30 | 4.54 | 13.70 | NA | 6.70 | 62.50 | 64.50 |
| 2001 | 1.90 | 2.45 | 1.55 | 4.20 | 24.30 | NA | 7.65 | 69.50 | 72.50 |

[1] Marketing year average prices received by farmers are based on monthly prices weighted by monthly marketings during specific periods. Prices do not include allowance for CCC loans outstanding, purchases by the government, or deficiency payments.

## Crops: Monthly prices received by farmers, 2000-2001

| Year | Corn per bushel | Winter wheat per bushel | Oats per bushel | Soybeans per bushel | Dry beans per cwt | Navy beans per cwt | Fall potatoes per cwt | All hay per ton | Alfalfa hay per ton |
|---|---|---|---|---|---|---|---|---|---|
| | *Dollars* | *Dollars* | *Dollars* | *Dollars* | *Dollars* | *Dollars* | *Dollars* | *Dollars* | *Dollars* |
| 2000 | | | | | | | | | |
| June | | | | | | | | 58.00 | 60.00 |
| July | | 1.93 | 1.33 | | | | 6.50 | 57.00 | 60.00 |
| August | | 1.86 | 1.13 | | | | 5.85 | 57.00 | 60.00 |
| September | | 2.00 | 1.15 | 4.75 | 13.70 | 12.20 | 5.40 | 63.00 | 65.00 |
| October | 1.74 | 2.14 | 1.35 | 4.50 | 15.10 | 13.10 | 5.85 | 63.00 | 65.00 |
| November | 1.86 | 2.01 | 1.54 | 4.55 | 13.70 | 12.10 | 6.45 | 73.00 | 75.00 |
| December | 1.88 | 2.02 | 1.36 | 4.73 | 13.00 | 11.70 | 6.55 | 63.00 | 65.00 |
| 2001 | | | | | | | | | |
| January | 2.04 | 2.62 | 1.47 | 4.67 | 12.50 | 11.00 | 6.85 | 59.00 | 60.00 |
| February | 1.96 | 2.49 | 1.42 | 4.45 | 12.80 | 11.00 | 7.15 | 64.00 | 65.00 |
| March | 1.95 | 2.44 | 1.62 | 4.42 | 13.10 | 12.30 | 7.60 | 69.00 | 70.00 |
| April | 1.90 | 2.36 | 1.29 | 4.29 | 11.90 | 11.20 | 8.35 | 64.00 | 65.00 |
| May | 1.86 | 2.37 | 1.49 | 4.39 | 12.60 | 11.60 | 7.30 | 63.00 | 65.00 |
| June | 1.75 | 1.96 | 1.47 | 4.43 | 13.90 | 12.20 | 8.05 | | |
| July | 1.89 | | | 4.81 | 16.00 | 13.00 | | | |
| August | 1.96 | | | 4.91 | 18.10 | 14.50 | | | |
| September | 1.93 | | | | | | | | |
| 2001 | | | | | | | | | |
| June | | | | | | | | 54.00 | 55.00 |
| July | | 2.34 | 1.40 | | | | 6.50 | 72.00 | 75.00 |
| August | | 2.42 | 1.36 | | | | 6.90 | 72.00 | 75.00 |
| September | | 2.39 | 1.46 | 4.76 | 21.20 | 18.00 | 6.35 | 72.00 | 75.00 |
| October | 1.82 | 2.46 | 1.57 | 4.06 | 23.50 | 19.20 | 6.45 | 72.00 | 75.00 |
| November | 1.75 | 2.61 | 1.80 | 4.09 | 25.30 | 21.50 | 7.10 | 71.00 | 75.00 |
| December | 1.90 | 2.89 | 2.10 | 4.16 | 24.50 | 22.30 | 7.20 | 77.00 | 80.00 |
| 2002 | | | | | | | | | |
| January | 1.93 | 2.81 | 2.32 | 4.24 | 24.60 | 22.20 | 7.80 | 77.00 | 80.00 |
| February | 1.90 | 2.63 | 1.99 | 4.26 | 24.20 | 23.20 | 8.25 | 76.00 | 80.00 |
| March | 1.92 | 2.65 | 2.03 | 4.44 | 26.90 | 23.00 | 9.20 | 77.00 | 80.00 |
| April | 1.88 | 2.49 | 2.49 | 4.66 | 28.70 | 20.80 | 9.40 | 81.00 | 85.00 |
| May | 1.92 | 2.48 | 2.34 | 4.60 | 30.00 | 20.70 | 9.15 | 73.00 | 75.00 |
| June | 1.97 | 2.69 | 2.30 | 4.97 | 27.10 | 15.30 | 10.00 | 54.00 | 55.00 |
| July [1] | 2.10 | 3.10 | 1.90 | 5.65 | 24.00 | 15.00 | | 63.00 | 65.00 |
| August | | | | | | | | | |
| September | | | | | | | | | |

[1] Preliminary prices.

## Prices paid by farmers, 1998-2002 [1]

| Item | Unit | 1998 | 1999 | 2000 | 2001 | 2002 |
|---|---|---|---|---|---|---|
| | | *Dollars* | *Dollars* | *Dollars* | *Dollars* | *Dollars* |
| Dairy feed, 16% protein [2] | Ton | 190 | 171 | 167 | 184 | 184 |
| Hog concentrate, 38-42% protein [2] | Ton | 300 | 273 | 288 | 290 | 298 |
| Soybean meal, 44% protein [2] | Cwt | 11.50 | 9.50 | 10.90 | 11.00 | 11.50 |
| Gasoline, unleaded, bulk [2] | Gallon | 1.16 | 1.17 | 1.48 | 1.48 | 1.40 |
| Diesel fuel [2] | Gallon | 0.79 | 0.76 | 1.12 | 1.15 | 1.00 |
| Tractor, 110-129 hp [3] | Each | 59,500 | 60,100 | 62,400 | 63,000 | 63,700 |
| Tractor, 200-280 hp, 4-wd [3] | Each | 116,000 | 116,000 | 120,000 | 127,000 | 132,000 |
| Planter, row crop, 8-row [3] | Each | 25,700 | 26,000 | 26,900 | 28,800 | 29,000 |
| Grain drill, press, 23-25 openers [3] | Each | 16,300 | 15,600 | 17,500 | 18,500 | 23,100 |
| Combine, self-prop. w/ grain head, large cap. [3] | Each | 140,000 | 142,000 | 146,000 | 152,000 | 156,000 |
| Ammonium nitrate [4] | Ton | 179 | 168 | 181 | 243 | 180 |
| Muriate of potash 60-62% $K_2O$ [4] | Ton | 161 | 166 | 162 | 167 | 161 |
| Superphosphate, 44-46% $P_2O_5$ [4] | Ton | 248 | 252 | 227 | 229 | 215 |
| Anhydrous ammonia [4] | Ton | 256 | 211 | 231 | 408 | 254 |
| Atrazine, 4#/gallon [3] | Gallon | 13.70 | 13.70 | 13.60 | 12.50 | 12.20 |
| Roundup, 4#/gallon EC [3] | Gallon | 56.30 | 45.50 | 43.30 | 44.50 | 43.50 |
| Harness, Surpass, 6.4-7#/gallon [3] | Gallon | 66.40 | 68.00 | 68.40 | 68.90 | 68.10 |
| Dual, 8#/gallon EC [3] | Gallon | 72.60 | 77.70 | 82.60 | 94.50 | 99.00 |
| Captan, 50% WP [3] | Pound | 3.36 | 3.46 | 3.45 | 3.61 | 3.76 |
| Ziram, 76% WP [3] | Pound | 2.88 | 2.92 | 2.72 | 2.82 | 2.82 |
| Guthion, 50% WP [3] | Pound | 8.97 | 9.20 | 9.68 | 9.87 | 10.60 |
| Imidan, Prolate, 50% WP [3] | Pound | 6.22 | 6.25 | 6.59 | 6.98 | 7.30 |

EC=Emulsifiable concentrate. WP=Wettable powder.
[1] Regional and U.S. data only. Published in April.
[2] Lake States=MI, MN, WI.
[3] United States.
[4] North Central Region=IL,IN, IA, MI, MN, MO, OH, WI.

## Farm production expenses, 1997-2001

| Item | 1997 | 1998 | 1999 | 2000 | 2001 |
|---|---|---|---|---|---|
| | *Million dollars* | *Million dollars* | *Million dollars* | *Million dollars* | *Million dollars* |
| Feed purchased | 422.9 | 373.8 | 327.3 | 322.1 | 378.5 |
| Livestock and poultry purchased | 41.0 | 39.2 | 44.1 | 56.7 | 56.1 |
| Seed purchased | 226.3 | 244.4 | 249.4 | 263.2 | 283.2 |
| Fertilizers and lime | 281.6 | 249.9 | 235.2 | 243.5 | 255.9 |
| Pesticides | 228.7 | 228.7 | 217.9 | 225.1 | 211.8 |
| Petroleum fuel and oils | 145.5 | 128.7 | 124.3 | 160.4 | 166.9 |
| Electricity | 58.5 | 56.6 | 58.3 | 58.0 | 62.8 |
| Repair and maintenance of capital items | 302.7 | 308.1 | 297.8 | 273.7 | 378.8 |
| Machine hire and custom work | 68.3 | 77.5 | 72.5 | 75.6 | 118.2 |
| Contract and hired labor expenses | 489.1 | 532.6 | 512.5 | 581.4 | 577.4 |
| Marketing, storage, and transportation expenses | 116.8 | 93.0 | 113.2 | 121.8 | 92.5 |
| Capital consumption | 534.2 | 543.3 | 570.6 | 581.1 | 588.5 |
| Real estate and nonreal estate interest | 249.9 | 254.8 | 253.1 | 263.4 | 257.9 |
| Property taxes | 248.1 | 228.3 | 211.8 | 221.0 | 218.7 |
| Net rent received by nonoperator landlords | 19.6 | 22.3 | 23.6 | 6.5 | 28.9 |
| Miscellaneous expenses | 392.6 | 373.4 | 398.3 | 391.5 | 393.5 |
| Total production expenses | 3,825.9 | 3,754.6 | 3,709.9 | 3,845.0 | 4,069.6 |

# Agricultural Exports

Michigan ranked 22nd in agricultural exports for fiscal year 2001. The table below shows the value of agricultural exports by commodity group. Michigan exports one-third of its agricultural crop. The data are calculated annually by commodity based on each States' share of the U.S. agricultural production. The top seven account for 83.5 percent of the State's agricultural exports. The total value of agricultural exports from Michigan in 2001 was estimated at $775 million.

**Top agricultural exports: Fiscal year 2001**

| Commodity | Value Million $ | Percent of Total | Rank in U.S. |
|---|---|---|---|
| 1. Soybeans and products | 180.7 | 23.3 | 10 |
| 2. Feed grains and products | 136.8 | 17.7 | 12 |
| 3. Vegetables and preparations | 127.9 | 16.5 | 8 |
| 4. Fruits and preparations | 79.3 | 10.2 | 5 |
| 5. Live animals and meat* | 48.1 | 6.2 | 24 |
| 6. Wheat and products | 43.0 | 5.6 | 18 |
| 7. Feeds and fodders | 31.0 | 4.0 | 18 |
| 8. Other | 127.8 | 16.5 | -- |
| Total | 774.6 | | 22 |

* Excluding Poultry
Source: U.S. Department of Agriculture, Economic Research Service, http:/www.ers.usda.gov/data/fatus, State export data.

**Agricultural exports from Michigan: Top 10 destinations, 2000-2001**

| Country | 2000 | 2001 |
|---|---|---|
| | *Thousand dollars* | *Thousand dollars* |
| Canada | 127,800 | 176,625 |
| Japan | 7,238 | 5,525 |
| Mexico | 4,062 | 4,945 |
| Italy | 5,511 | 4,927 |
| United Kingdom | 3,282 | 3,223 |
| Venezuela | 314 | 2,336 |
| Spain | 1,281 | 1,273 |
| Dominican Republic | 227 | 958 |
| Germany | 290 | 826 |
| Guatemala | 102 | 529 |

Source: US Department of Commerce, International Trade Administration (www.ita.doc.gov)

# Farm Labor

The number of self-employed, unpaid workers and number of hired workers declined in 2001. Self-employed workers decreased 1 percent to 37,000 while unpaid workers declined 23 percent to 8,800. Hired workers fell 7 percent to 23,900. Wage rates for all hired workers increased 2 percent to $8.96.

**Farm workers: Annual average number and hours worked, 1997-2001**

| Year | Number of workers | | | Hours worked by hired workers |
|---|---|---|---|---|
| | Self employed | Unpaid | Hired | |
| | *1,000* | *1,000* | *1,000* | *Hours per week* |
| 1997 | 38.3 | 8.5 | 21.8 | 36.9 |
| 1998 | 36.8 | 8.0 | 23.8 | 38.6 |
| 1999 | 34.3 | 11.0 | 25.1 | 38.8 |
| 2000 | 37.3 | 11.5 | 25.8 | 38.9 |
| 2001 | 37.0 | 8.8 | 23.9 | 36.9 |

**Hired farm workers: Annual average wage rates, 1997-2001**

| Year | All hired workers | Field workers | Field and livestock workers |
|---|---|---|---|
| | *Dollars per hour* | *Dollars per hour* | *Dollars per hour* |
| 1997 | 7.14 | 6.78 | 6.62 |
| 1998 | 7.87 | 7.39 | 7.39 |
| 1999 | 8.21 | 7.44 | 7.37 |
| 2000 | 8.77 | 7.87 | 7.93 |
| 2001 | 8.96 | 8.15 | 8.18 |

# Agricultural Chemical Usage, 2001

The 2001 Chemical Use Summaries for Fruit and Field Crops and the 2000 Nursery and Floriculture Chemical Use Summary provide pesticide use data on 6 Michigan fruit crops, corn, and 12 nursery and floriculture production categories. Michigan State University's Project Generating Research and Extension to meet Environmental and Economic Needs (GREEEN) funded the data collection for sweet cherries, grapes, and peaches to maintain the published data series for those crops. Fruit chemical use statistics are published every other year alternating with vegetable chemical use statistics. This is the first publication of nursery and floriculture chemical use statistics, which provide the percentage of operations reporting an active ingredient. The tables include only a partial listing of the reported active ingredients. The entire series of chemical usage statistics since 1990 for Michigan and the United States can be found at http:/www.usda.gov/nass. A list of associated trade names is provided following the chemical application tables as an aid in reviewing the data. The list does not mean to imply use of any specific trade name.

**Apples: Agricultural chemical applications, 2001 [1]**

| Agricultural chemical | Area applied | Applications | Rate per application | Rate per crop year | Total applied |
|---|---|---|---|---|---|
| | *Percent* | *Number* | *Pounds per acre* | *Pounds per acre* | *1,000 lbs* |
| Herbicides | | | | | |
| 2,4-D | 3 | 1.0 | 0.54 | 0.59 | 0.7 |
| 2,4-D, Dimeth, salt | 14 | 1.3 | 0.53 | 0.69 | 4.2 |
| Diuron | 14 | 1.0 | 0.75 | 0.80 | 5.0 |
| Glyphosate | 29 | 1.5 | 0.48 | 0.73 | 9.4 |
| Norflurazon | 1 | 1.4 | 0.40 | 0.60 | 0.4 |
| Paraquat | 16 | 1.2 | 0.38 | 0.47 | 3.3 |
| Simazine | 10 | 1.0 | 1.03 | 1.11 | 4.9 |
| Terbacil | 10 | 1.0 | 0.26 | 0.27 | 1.3 |
| Insecticides | | | | | |
| Abamectin | 13 | 1.0 | 0.01 | 0.01 | 0.1 |
| Azinphos-methyl | 87 | 3.6 | 0.63 | 2.30 | 89.6 |
| Benzoic acid | 46 | 2.1 | 0.18 | 0.37 | 7.5 |
| Bt (Bacillus thur.) [2] | 14 | 1.9 | | | |
| Carbaryl | 39 | 1.5 | 0.90 | 1.35 | 23.5 |
| Chlorpyrifos | 61 | 1.2 | 1.02 | 1.29 | 34.7 |
| Clofentezine | 8 | 1.0 | 0.12 | 0.13 | 0.4 |
| Dimethoate | 6 | 2.9 | 0.67 | 1.97 | 5.4 |
| Endosulfan | 14 | 1.1 | 0.91 | 1.09 | 7.0 |
| Esfenvalerate | 43 | 1.3 | 0.03 | 0.05 | 0.9 |
| Fenpropathrin | 38 | 1.5 | 0.22 | 0.34 | 5.8 |
| Hexythiazox | 7 | 1.1 | 0.09 | 0.10 | 0.3 |
| Imidacloprid | 49 | 1.4 | 0.06 | 0.08 | 1.8 |
| Indoxacarb | ([3]) | 1.2 | 0.09 | 0.11 | ([4]) |
| Methomyl | 17 | 1.3 | 0.66 | 0.90 | 6.8 |
| Permethrin | 21 | 1.1 | 0.12 | 0.14 | 1.3 |
| Petroleum distillate | 26 | 1.2 | 15.31 | 19.46 | 225.0 |
| Phosmet | 76 | 2.8 | 1.18 | 3.41 | 115.6 |
| Pyridaben | 38 | 1.1 | 0.15 | 0.18 | 2.9 |
| Tebufenozide | 4 | 1.2 | 0.20 | 0.26 | 0.5 |

See footnote(s) at end of table. --continued

**Apples: Agricultural chemical applications, 2001 [1] (continued)**

| Agricultural chemical | Area applied | Applications | Rate per application | Rate per crop year | Total applied |
|---|---|---|---|---|---|
| | *Percent* | *Number* | *Pounds per acre* | *Pounds per acre* | *1,000 lbs* |
| Fungicides | | | | | |
| Basic copper sulfate | 8 | 1.9 | 0.52 | 1.03 | 3.5 |
| Benomyl | 21 | 1.6 | 0.19 | 0.31 | 2.9 |
| Calcium polysulfide | 4 | 1.9 | 4.72 | 9.23 | 15.3 |
| Captan | 91 | 5.3 | 1.74 | 9.34 | 376.6 |
| Copper hydroxide | 22 | 1.2 | 1.71 | 2.07 | 20.2 |
| Copper oxychlo. sul. | 12 | 1.2 | 2.11 | 2.61 | 13.6 |
| Copper oxychloride | 7 | 1.4 | 2.17 | 3.19 | 9.6 |
| Copper sulfate | 10 | 1.3 | 1.64 | 2.14 | 9.4 |
| Cyprodinil | 22 | 1.6 | 0.14 | 0.22 | 2.1 |
| Dodine | ([3]) | 1.5 | 1.50 | 2.26 | 0.8 |
| Fenarimol | 14 | 2.4 | 0.05 | 0.12 | 0.7 |
| Kresoxim-methyl | 36 | 1.8 | 0.11 | 0.21 | 3.4 |
| Mancozeb | 66 | 3.6 | 2.41 | 8.78 | 257.7 |
| Metiram | 27 | 3.4 | 2.43 | 8.31 | 99.2 |
| Myclobutanil | 40 | 2.9 | 0.09 | 0.28 | 4.9 |
| Oxytetracycline | 3 | 2.5 | 0.25 | 0.63 | 0.9 |
| Streptomycin | 42 | 1.9 | 0.22 | 0.42 | 8.0 |
| Sulfur | 40 | 3.7 | 3.26 | 12.25 | 216.2 |
| Thiram | 10 | 2.4 | 1.88 | 4.53 | 20.4 |
| Triadimefon | 22 | 2.2 | 0.06 | 0.13 | 1.3 |
| Trifloxystrobin | 37 | 1.9 | 0.06 | 0.11 | 1.8 |
| Ziram | 45 | 2.6 | 2.40 | 6.39 | 128.4 |
| Other chemicals | | | | | |
| Benzyladenine | 11 | 1.0 | 0.03 | 0.03 | 0.1 |
| Butenic acid hydro. | 2 | 1.0 | 0.07 | 0.08 | 0.1 |
| Gibberellic acid | 6 | 1.3 | 0.02 | 0.02 | ([4]) |
| Gibberellins A4A7 | 11 | 1.0 | 0.00 | 0.00 | ([4]) |
| NAA | 26 | 1.4 | 0.03 | 0.05 | 0.5 |
| Prohexadione calcium | 5 | 1.0 | 0.27 | 0.27 | 0.6 |

[1] Bearing acres in 2001 for Michigan were 44,000 acres.
[2] Rates and total applied are not available because amounts of active ingredient are not comparable between products.
[3] Area applied is less than one percent.
[4] Total applied is less than 50 lbs.

**Blueberries: Agricultural chemical applications, 2001 [1]**

| Agricultural Chemical | Area applied | Applications | Rate per application | Rate per crop year | Total applied |
|---|---|---|---|---|---|
| | *Percent* | *Number* | *Pounds per acre* | *Pounds per acre* | *1,000 lbs* |
| Herbicides | | | | | |
| Diuron | 29 | 1.2 | 0.70 | 0.84 | 4.2 |
| Glyphosate | 29 | 1.3 | 0.41 | 0.56 | 2.8 |
| Hexazinone | 5 | 1.0 | 0.41 | 0.42 | 0.4 |
| Paraquat | 13 | 1.2 | 0.22 | 0.27 | 0.6 |
| Simazine | 28 | 1.1 | 1.20 | 1.37 | 6.6 |
| Insecticides | | | | | |
| Azinphos-methyl | 70 | 1.9 | 0.54 | 1.06 | 12.8 |
| Bt (Bacillus thur.) [2] | 6 | 1.4 | | | |
| Carbaryl | 35 | 1.9 | 1.56 | 3.09 | 18.8 |
| Esfenvalerate | 13 | 1.4 | 0.04 | 0.06 | 0.1 |
| Imidacloprid | 3 | 1.0 | 0.08 | 0.09 | ([3]) |
| Malathion | 42 | 2.2 | 1.81 | 4.15 | 30.3 |
| Phosmet | 73 | 2.2 | 0.84 | 1.91 | 24.5 |
| Fungicides | | | | | |
| Benomyl | 63 | 1.9 | 0.48 | 0.96 | 10.6 |
| Captan | 60 | 3.0 | 2.05 | 6.27 | 65.5 |
| Chlorothalonil | 26 | 1.2 | 2.68 | 3.36 | 15.2 |
| Fenbuconazole | 33 | 1.6 | 0.09 | 0.14 | 0.8 |
| Fosetyl-al | 7 | 2.1 | 3.48 | 7.50 | 8.8 |
| Ziram | 50 | 2.3 | 2.54 | 5.93 | 51.8 |

[1] Bearing acres in 2001 for Michigan were 17,400 acres.
[2] Rates and total applied are not available because amounts of active ingredient are not comparable between products.
[3] Total applied is less than 50 lbs.

**Cherries, sweet: Agricultural chemical applications, 2001 [1]**

| Agricultural chemical | Area applied | Applications | Rate per application | Rate per crop year | Total applied |
|---|---|---|---|---|---|
| | *Percent* | *Number* | *Pounds per acre* | *Pounds per acre* | *1,000 lbs* |
| Herbicides | | | | | |
| 2,4-D, Dimeth. salt | 13 | 1.2 | 1.02 | 1.30 | 1.2 |
| Glyphosate | 40 | 1.1 | 0.66 | 0.74 | 2.2 |
| Paraquat | 21 | 1.2 | 0.34 | 0.42 | 0.7 |
| Simazine | 16 | 1.0 | 1.23 | 1.24 | 1.5 |
| Insecticides | | | | | |
| Azinphos-methyl | 89 | 3.1 | 0.50 | 1.59 | 10.4 |
| Carbaryl | 36 | 1.1 | 2.14 | 2.52 | 6.7 |
| Chlorpyrifos | 5 | 1.0 | 0.50 | 0.50 | 0.2 |
| Esfenvalerate | 50 | 1.6 | 0.03 | 0.05 | 0.2 |
| Permethrin | 37 | 2.1 | 0.12 | 0.25 | 0.7 |
| Fungicides | | | | | |
| Benomyl | 15 | 1.6 | 0.43 | 0.70 | 0.8 |
| Captan | 20 | 2.0 | 1.64 | 3.39 | 5.1 |
| Chlorothalonil | 72 | 1.8 | 1.94 | 3.54 | 18.9 |
| Copper hydroxide | 10 | 1.2 | 1.70 | 2.15 | 1.6 |
| Dodine | 3 | 1.5 | 0.53 | 0.83 | 0.2 |
| Fenbuconazole | 57 | 3.5 | 0.08 | 0.27 | 1.1 |
| Ferbam | 37 | 2.3 | 1.96 | 4.67 | 12.9 |
| Iprodione | 9 | 1.0 | 0.91 | 0.91 | 0.6 |
| Myclobutanil | 12 | 1.3 | 0.08 | 0.11 | 0.1 |
| Sulfur | 78 | 4.8 | 4.96 | 23.99 | 137.7 |
| Tebuconazole | 62 | 3.2 | 0.15 | 0.48 | 2.2 |
| Ziram | 24 | 2.0 | 2.11 | 4.40 | 7.7 |
| Other chemicals | | | | | |
| Ethephon | 69 | 1.1 | 0.45 | 0.50 | 2.6 |

[1] Bearing acres in 2001 for Michigan were 7,400 acres.

**Cherries, tart: Agricultural chemical applications, 2001 [1]**

| Agricultural chemical | Area applied | Applications | Rate per application | Rate per crop year | Total applied |
|---|---|---|---|---|---|
| | *Percent* | *Number* | *Pounds per acre* | *Pounds per acre* | *1,000 lbs* |
| Herbicides | | | | | |
| 2,4-D | 1 | 1.1 | 0.59 | 0.68 | 0.2 |
| 2,4-D, Dimeth. salt | 15 | 1.0 | 0.74 | 0.81 | 3.2 |
| Diuron | 2 | 1.1 | 0.97 | 1.13 | 0.7 |
| Glyphosate | 45 | 1.0 | 0.49 | 0.53 | 6.5 |
| Paraquat | 24 | 1.0 | 0.27 | 0.28 | 1.9 |
| Simazine | 35 | 1.0 | 0.69 | 0.72 | 6.9 |
| Insecticides | | | | | |
| Azinphos-methyl | 89 | 2.7 | 0.49 | 1.35 | 33.1 |
| Carbaryl | 7 | 1.2 | 1.53 | 1.88 | 3.6 |
| Chlorpyrifos | 8 | 1.1 | 0.69 | 0.82 | 1.8 |
| Permethrin | 17 | 2.3 | 0.14 | 0.33 | 1.5 |
| Phosmet | 70 | 1.7 | 0.96 | 1.67 | 31.9 |
| Pyridaben | 2 | 1.0 | 0.20 | 0.20 | 0.1 |
| Fungicides | | | | | |
| Benomyl | 5 | 1.6 | 0.28 | 0.45 | 0.6 |
| Calcium polysulfide | 2 | 1.9 | 2.86 | 5.61 | 3.8 |
| Captan | 26 | 3.0 | 1.15 | 3.46 | 25.1 |
| Chlorothalonil | 96 | 2.3 | 1.74 | 4.11 | 108.4 |
| Copper oxychlo. sul. | 5 | 2.1 | 1.83 | 3.95 | 5.0 |
| Dodine | 20 | 3.4 | 0.50 | 1.70 | 9.5 |
| Fenbuconazole | 46 | 2.4 | 0.08 | 0.19 | 2.4 |
| Myclobutanil | 30 | 2.2 | 0.07 | 0.15 | 1.2 |
| Sulfur | 90 | 4.9 | 3.69 | 18.25 | 450.1 |
| Tebuconazole | 83 | 3.4 | 0.12 | 0.41 | 9.2 |
| Ziram | 5 | 2.7 | 2.45 | 6.70 | 9.2 |
| Other chemicals | | | | | |
| Ethephon | 78 | 1.1 | 0.20 | 0.24 | 5.1 |
| Gibberellic acid | 38 | 1.2 | 0.05 | 0.06 | 0.7 |

[1] Bearing acres in 2001 for Michigan were 27,400 acres.

**Grapes, all: Agricultural chemical applications, 2001 [1]**

| Agricultural chemical | Area applied | Applications | Rate per application | Rate per crop year | Total applied |
|---|---|---|---|---|---|
| | *Percent* | *Number* | *Pounds per acre* | *Pounds per acre* | *1,000 lbs* |
| Herbicides | | | | | |
| Glyphosate | 78 | 1.1 | 0.56 | 0.66 | 6.3 |
| Paraquat | 71 | 1.4 | 0.35 | 0.50 | 4.4 |
| Simazine | 38 | 1.2 | 0.81 | 0.99 | 4.6 |
| Insecticides | | | | | |
| Azinphos-methyl | 41 | 1.5 | 0.60 | 0.90 | 4.5 |
| Carbaryl | 58 | 2.2 | 1.11 | 2.50 | 17.8 |
| Fenpropathrin | 52 | 1.7 | 0.16 | 0.28 | 1.8 |
| Phosmet | 17 | 1.5 | 1.10 | 1.75 | 3.6 |
| Fungicides | | | | | |
| Azoxystrobin | 28 | 1.2 | 0.20 | 0.26 | 0.9 |
| Captan | 3 | 2.2 | 1.66 | 3.67 | 1.3 |
| Copper hydroxide | 12 | 1.0 | 0.66 | 0.70 | 1.0 |
| Cyprodinil | 2 | 1.2 | 0.46 | 0.58 | 0.1 |
| Iprodione | 3 | 2.1 | 0.84 | 1.77 | 0.5 |
| Mancozeb | 95 | 3.0 | 2.24 | 6.71 | 78.4 |
| Metalaxyl | 16 | 1.2 | 0.14 | 0.18 | 0.4 |
| Myclobutanil | 33 | 1.9 | 0.09 | 0.17 | 0.7 |
| Tebuconazole | 55 | 2.0 | 0.11 | 0.22 | 1.5 |
| Triadimefon | 6 | 1.5 | 0.11 | 0.16 | 0.1 |
| Ziram | 85 | 2.3 | 2.51 | 5.83 | 60.6 |

[1] Bearing acres in 2001 for Michigan were 12,300 acres.

**Peaches: Agricultural chemical applications, 2001 [1]**

| Agricultural chemical | Area applied | Applications | Rate per application | Rate per crop year | Total applied |
|---|---|---|---|---|---|
| | *Percent* | *Number* | *Pounds per acre* | *Pounds per acre* | *1,000 lbs* |
| Herbicides | | | | | |
| 2,4-D, Dimeth.salt | 6 | 1.1 | 0.31 | 0.37 | 0.1 |
| Diuron | 17 | 1.1 | 0.75 | 0.87 | 0.7 |
| Glyphosate | 21 | 1.3 | 0.48 | 0.63 | 0.6 |
| Paraquat | 43 | 1.1 | 0.29 | 0.34 | 0.7 |
| Simazine | 9 | 1.0 | 0.98 | 1.00 | 0.4 |
| Terbacil | 18 | 1.0 | 0.28 | 0.28 | 0.2 |
| Insecticides | | | | | |
| Azinphos-methyl | 48 | 2.8 | 0.68 | 1.93 | 4.1 |
| Carbaryl | 41 | 1.9 | 1.47 | 2.89 | 5.3 |
| Chlorpyrifos | 12 | 1.2 | 2.53 | 3.06 | 1.6 |
| Endosulfan | 40 | 1.8 | 0.77 | 1.43 | 2.6 |
| Esfenvalerate | 79 | 2.5 | 0.04 | 0.09 | 0.3 |
| Methomyl | 17 | 1.8 | 0.45 | 0.81 | 0.6 |
| Permethrin | 34 | 2.5 | 0.11 | 0.29 | 0.5 |
| Phosmet | 40 | 1.9 | 1.05 | 2.04 | 3.7 |
| Fungicides | | | | | |
| Basic copper sulfate | 5 | 1.0 | 0.96 | 0.96 | 0.2 |
| Benomyl | 8 | 2.0 | 0.30 | 0.62 | 0.2 |
| Captan | 45 | 2.9 | 1.69 | 5.02 | 10.2 |
| Chlorothalonil | 16 | 1.3 | 2.04 | 2.78 | 2.0 |
| Copper hydroxide | 8 | 1.1 | 1.77 | 2.02 | 0.7 |
| Copper oxychlo. sul. | 16 | 1.0 | 2.73 | 2.91 | 2.1 |
| Copper oxychloride | 4 | 1.0 | 2.25 | 2.25 | 0.4 |
| Copper sulfate | 7 | 1.1 | 1.77 | 2.09 | 0.7 |
| Fenbuconazole | 82 | 2.9 | 0.09 | 0.27 | 1.0 |
| Ferbam | 7 | 1.0 | 3.58 | 3.82 | 1.3 |
| Myclobutanil | 12 | 2.2 | 0.09 | 0.20 | 0.1 |
| Oxytetracycline | 28 | 2.5 | 0.16 | 0.40 | 0.5 |
| Propiconazole | 27 | 1.7 | 0.10 | 0.18 | 0.2 |
| Sulfur | 78 | 4.6 | 5.72 | 26.45 | 92.3 |
| Tebuconazole | 11 | 3.3 | 0.15 | 0.50 | 0.3 |
| Thiophanate-methyl | 8 | 1.0 | 0.51 | 0.55 | 0.2 |
| Ziram | 16 | 1.1 | 3.37 | 3.93 | 2.9 |
| Other chemicals | | | | | |
| E-8 Dodecenyl acetate | 12 | 1.0 | 0.001 | 0.001 | ( [2] ) |
| Octadecadien (E,Z) [3] | 11 | 1.1 | | | ( [2] ) |
| Octadecadien (Z,Z) | 11 | 1.1 | 0.01 | 0.01 | ( [2] ) |
| Z-8 Dodecanol [3] | 12 | 1.0 | | | ( [2] ) |
| Z-8 Dodecen acetate | 12 | 1.0 | 0.01 | 0.01 | ( [2] ) |

[1] Bearing acres in 2001 for Michigan were 4,500 acres.
[2] Total applied is less than 50 lbs.
[3] Rates and total applied are not available because amounts of active ingredient are too small.

**Nursery propagation or lining out stock: Percent of nursery operations using an active ingredient, 2000 [1]**

| Herbicides | | Insecticides | | Fungicides | | Other chemicals | |
|---|---|---|---|---|---|---|---|
| Active ingredient | Percent | Active ingredient | Percent | Active ingredient | Percent | Active ingredient | Percent |
| 2,4-D, Dimeth. salt | 14 | Acephate | 8 | Chlorothalonil | 14 | Alk. dim. benzyl 50% | 4 |
| Dicamba, Dimet. salt | 14 | Azinphos-methyl | 9 | Etridiazole | 12 | Alk. dim. benzyl 60% | 7 |
| Glyphosate | 40 | Bifenthrin | 19 | Fosetyl-al | 19 | Alk. dim. eth. benz. | 7 |
| Isoxaben | 21 | Carbaryl | 16 | Mancozeb | 21 | Indolebutyric acid | 6 |
| MCPP, DMA salt | 14 | Chlorpyrifos | 35 | Mefenoxam | 7 | Methyl bromide | 7 |
| MSMA | 14 | Diazinon | 15 | Thiophanate-methyl | 36 | NAA | 6 |
| Oryzalin | 23 | Diflubenzuron | 6 | | | | |
| Oxyfluorfen | 20 | Lindane | 6 | | | | |
| | | Malathion | 12 | | | | |

[1] Most commonly used active ingredients.

**Coniferous evergreens: Percent of nursery operations using an active ingredient, 2000 [1]**

| Herbicides | | Insecticides | | Fungicides | | Other chemicals | |
|---|---|---|---|---|---|---|---|
| Active ingredient | Percent | Active ingredient | Percent | Active ingredient | Percent | Active ingredient | Percent |
| 2,4-D | 5 | Acephate | 6 | Benomyl | 3 | Diphacinone | 2 |
| Atrazine | 7 | Bifenthrin | 13 | Captan | 5 | Metam-sodium | 1 |
| Clopyralid | 6 | Carbaryl | 27 | Chlorothalonil | 11 | Methyl bromide | 3 |
| Fluazifop-P-butyl | 8 | Chlorpyrifos | 16 | Copper hydroxide | 2 | Zinc phosphide | 1 |
| Glyphosate | 49 | Hexythiazox | 7 | Etridiazole | 2 | | |
| Isoxaben | 6 | Lindane | 6 | Mancozeb | 5 | | |
| Oryzalin | 10 | Malathion | 11 | Myclobutanil | 2 | | |
| Oxyfluorfen | 16 | Petroleum distillate | 10 | Thiophanate-methyl | 7 | | |
| Simazine | 22 | Piperonyl butoxide | 7 | | | | |
| Trifluralin | 6 | | | | | | |

[1] Most commonly used active ingredients.

**Deciduous shade trees: Percent of nursery operations using an active ingredient, 2000 [1]**

| Herbicides | | Insecticides | | Fungicides | | Other chemicals | |
|---|---|---|---|---|---|---|---|
| Active ingredient | Percent | Active ingredient | Percent | Active ingredient | Percent | Active ingredient | Percent |
| 2,4-D | 2 | Acephate | 20 | Captan | 7 | Bitrex | 2 |
| Clopyralid | 2 | Carbaryl | 29 | Chlorothalonil | 4 | Butyl mercaptan | 2 |
| Glyphosate | 30 | Chlorpyrifos | 19 | Copper hydroxide | 4 | Capsaicin | 2 |
| Isoxaben | 9 | Diazinon | 14 | Mancozeb | 4 | Metaldehyde | 5 |
| Oryzalin | 12 | Dicofol | 7 | | | Pelargonic acid | 2 |
| Oxyfluorfen | 4 | Imidacloprid | 7 | | | | |
| Paraquat | 4 | Malathion | 13 | | | | |
| Prodiamine | 3 | Petroleum distillate | 16 | | | | |
| Simazine | 6 | Petroleum oil | 8 | | | | |
| Trifluralin | 4 | Potassium salts | 8 | | | | |

[1] Most commonly used active ingredients.

**Deciduous flowering trees: Percent of nursery operations using an active ingredient, 2000 [1]**

| Herbicides | | Insecticides | | Fungicides | | Other chemicals | |
|---|---|---|---|---|---|---|---|
| Active ingredient | Percent | Active ingredient | Percent | Active ingredient | Percent | Active ingredient | Percent |
| Glyphosate | 47 | Acephate | 19 | Chlorothalonil | 16 | Capsaicin | 3 |
| Isoxaben | 7 | Carbaryl | 24 | Copper hydroxide | 6 | | |
| Oryzalin | 19 | Chlorpyrifos | 3 | Etridiazole | 13 | | |
| Oxfluorfen | 9 | Cyfluthrin | 5 | Fenarimol | 7 | | |
| Pendimethalin | 3 | Diazinon | 3 | Mancozeb | 9 | | |
| Prodiamine | 3 | Dicofol | 3 | Mefenoxam | 13 | | |
| Sethoxydim | 3 | Diflubenzuron | 3 | PCNB | 13 | | |
| Simazine | 13 | Dimethoate | 6 | Propiconazole | 7 | | |
| Trifluralin | 5 | Lindane | 3 | Thiophanate-methyl | 35 | | |
| | | Malathion | 3 | | | | |

[1] Most commonly used active ingredients.

**Deciduous shrubs and other ornamentals: Percent of nursery operations using an active ingredient, 2000 [1]**

| Herbicides | | Insecticides | | Fungicides | | Other chemicals | |
|---|---|---|---|---|---|---|---|
| Active ingredient | Percent | Active ingredient | Percent | Active ingredient | Percent | Active ingredient | Percent |
| Clopyralid | 5 | Acephate | 21 | Chlorothalonil | 16 | Hydrogen peroxide | 3 |
| Fluazifop-P-butyl | 6 | Bifenthrin | 14 | Copper hydroxide | 12 | Indolebutyric acid | 11 |
| Glyphosate | 21 | Carbaryl | 24 | Fludioxonil | 8 | Metaldehyde | 6 |
| Isoxaben | 21 | Chlorpyrifos | 16 | Mancozeb | 19 | NAA | 11 |
| Oryzalin | 25 | Cyfluthrin | 13 | Mefenoxam | 6 | Pelargonic acid | 13 |
| Oxadiazon | 6 | Diflubenzuron | 10 | Myclobutanil | 6 | Zinc phosphide | 5 |
| Oxyfluorfen | 25 | Imidacloprid | 13 | Potassium bicarbon | 6 | | |
| Prodiamine | 6 | Lindane | 7 | Propiconazole | 10 | | |
| Simazine | 10 | Malathion | 15 | Thiophanate-methyl | 26 | | |
| Trifluralin | 23 | Petroleum oil | 16 | | | | |

[1] Most commonly used active ingredients.

**Christmas trees: Percent of nursery operations using an active ingredient, 2000 [1]**

| Herbicides | | Insecticides | | Fungicides | | Other chemicals [2] | |
|---|---|---|---|---|---|---|---|
| Active ingredient | Percent | Active ingredient | Percent | Active ingredient | Percent | Active ingredient | Percent |
| Atrazine | 12 | Azinphos-methyl | 7 | Benomyl | 4 | | |
| Clopyralid | 10 | Carbaryl | 35 | Chlorothalonil | 33 | | |
| Fluazifop-P-butyl | 6 | Chlorpyrifos | 49 | Copper (metallic) | 1 | | |
| Glyphosate | 49 | Cyfluthrin | 13 | Copper hydroxide | 1 | | |
| Hexazinone | 18 | Diflubenzuron | 10 | Copper resinate | 1 | | |
| Oryzalin | 9 | Lindane | 15 | Mancozeb | 9 | | |
| Oxyfluorfen | 10 | Malathion | 12 | Thiophanate-methyl | 1 | | |
| Pendimethalin | 10 | Oxydemeton-methyl | 7 | Triadimefon | 6 | | |
| Simazine | 30 | | | | | | |

[1] Most commonly used active ingredients.
[2] None reported.

**Cut flowers: Percent of floriculture operations using an active ingredient, 2000 [1]**

| Herbicides | | Insecticides | | Fungicides | | Other chemicals | |
|---|---|---|---|---|---|---|---|
| Active ingredient | Percent | Active ingredient | Percent | Active ingredient | Percent | Active ingredient | Percent |
| Bromoxynil | 4 | Abamectin | 19 | Butanone | 28 | Capsaicin | 4 |
| Fluazifop-P-butyl | 4 | Acephate | 46 | Captan | 15 | Hydrogen peroxide | 4 |
| Glyphosate | 19 | Bifenthrin | 19 | Chlorothalonil | 7 | | |
| Isoxaben | 3 | Endosulfan | 11 | Copper sulfate | 11 | | |
| Metolachlor | 4 | | | Etridiazole | 8 | | |
| Oryzalin | 11 | | | Iprodione | 7 | | |
| Trifluralin | 39 | | | PCNB | 12 | | |
| | | | | Thiophanate-methyl | 22 | | |
| | | | | Trichoderma harz. | 7 | | |

[1] Most commonly used active ingredients.

**Flowering plants: Percent of floriculture operations using an active ingredient, 2000 [1]**

| Herbicides | | Insecticides | | Fungicides | | Other chemicals | |
|---|---|---|---|---|---|---|---|
| Active ingredient | Percent | Active ingredient | Percent | Active ingredient | Percent | Active ingredient | Percent |
| Ammonium benzadox | 3 | Abamectin | 33 | Chlorothalonil | 14 | Ancymidol | 7 |
| Atrazine | 1 | Acephate | 23 | Copper sulfate | 10 | Benzyladenine | 3 |
| | | Azadirachtin | 18 | Etridiazole | 31 | Chlormequat chloride | 26 |
| | | Bifenthrin | 15 | Fenhexamid | 6 | Daminozide | 24 |
| | | Chlorpyrifos | 22 | Fludioxonil | 16 | Ethephon | 21 |
| | | Cyfluthrin | 19 | Fosetyl-al | 7 | Gibberellins A4A7 | 3 |
| | | Endosulfan | 13 | Iprodione | 7 | Hydrogen peroxide | 7 |
| | | Fluvalinate | 13 | Mefenoxam | 21 | Paclobutrazol | 28 |
| | | Imidacloprid | 59 | PCNB | 11 | Uniconazole | 6 |
| | | Spinosad | 21 | Thiophanate-methyl | 36 | | |

[1] Most commonly used active ingredients.

**Bedding plants: Percent of floriculture operations using an active ingredient, 2000 [1]**

| Herbicides | | Insecticides | | Fungicides | | Other chemicals | |
|---|---|---|---|---|---|---|---|
| Active ingredient | Percent | Active ingredient | Percent | Active ingredient | Percent | Active ingredient | Percent |
| Ammonium benzadox | 1 | Abamectin | 33 | Chlorothalonil | 19 | Alk. dim. benzyl 60% | 1 |
| Glyphosate | 2 | Acephate | 32 | Etridiazole | 32 | Alk. dim. eth. benz. | 1 |
| | | Azadirachtin | 8 | Fludioxonil | 12 | Ancymidol | 3 |
| | | Bifenthrin | 11 | Iprodione | 13 | Chlormequat chloride | 23 |
| | | Chlorpyrifos | 22 | Mancozeb | 9 | Daminozide | 43 |
| | | Cyfluthrin | 13 | Mefenoxam | 20 | Ethephon | 10 |
| | | Fluvalinate | 9 | Metalaxyl | 7 | Hydrogen peroxide | 4 |
| | | Imidacloprid | 24 | PCNB | 9 | Methyl bromide | 2 |
| | | Pymetrozine | 10 | Thiophanate-methyl | 43 | Paclobutrazol | 24 |
| | | Spinosad | 17 | Vinclozolin | 7 | Uniconazole | 7 |

[1] Most commonly used active ingredients.

**Foliage plants: Percent of floriculture operations using an active ingredient, 2000 [1]**

| Herbicides | | Insecticides | | Fungicides | | Other chemicals | |
|---|---|---|---|---|---|---|---|
| Active ingredient | Percent | Active ingredient | Percent | Active ingredient | Percent | Active ingredient | Percent |
| Glyphosate | 6 | Abamectin | 27 | Chlorothalonil | 8 | Daminozide | 2 |
| | | Acephate | 23 | Copper sulfate | 6 | Ethephon | 13 |
| | | Bifenthrin | 26 | Etridiazole | 27 | Gibberellic acid | 6 |
| | | Bt (Bacillus thur.) | 14 | Iprodione | 6 | Gliocladium virens | 6 |
| | | Chlorpyrifos | 14 | Mancozeb | 6 | Hydrogen peroxide | 8 |
| | | Diazinon | 13 | Mefenoxam | 5 | Indolebutyric acid | 8 |
| | | Fluvalinate | 24 | PCNB | 6 | | |
| | | Imidacloprid | 25 | Piperalin | 6 | | |
| | | S-Kinoprene | 12 | Thiophanate-methyl | 21 | | |
| | | | | Trichoderma harz. | 5 | | |

[1] Most commonly used active ingredients.

**Floriculture propagation material: Percent of floriculture operations using an active ingredient, 2000 [1]**

| Herbicides | | Insecticides | | Fungicides | | Other chemicals | |
|---|---|---|---|---|---|---|---|
| Active ingredient | Percent | Active ingredient | Percent | Active ingredient | Percent | Active ingredient | Percent |
| Isoxaben | 6 | Chlorpyrifos | 24 | Chlorothalonil | 10 | Ancymidol | 24 |
| S-Metolachlor | 6 | Diflubenzuron | 5 | Copper sulfate | 31 | Chlormequat chloride | 10 |
| | | Fluvalinate | 6 | Etridiazole | 9 | Daminozide | 15 |
| | | Imidacloprid | 18 | Fenhexamid | 5 | Hydrogen peroxide | 6 |
| | | Methiocarb | 5 | Fludioxonil | 9 | Indolebutyric acid | 10 |
| | | Petroleum distillate | 6 | Mefenoxam | 4 | NAA | 10 |
| | | Spinosad | 5 | Myclobutanil | 5 | Paclobutrazol | 15 |
| | | | | PCNB | 5 | | |
| | | | | Thiophanate | 6 | | |
| | | | | Thiophanate-methyl | 9 | | |

[1] Most commonly used active ingredients.

**Herbaceous perennials: Percent of floriculture operations using an active ingredient, 2000 [1]**

| Herbicides | | Insecticides | | Fungicides | | Other chemicals | |
|---|---|---|---|---|---|---|---|
| Active ingredient | Percent | Active ingredient | Percent | Active ingredient | Percent | Active ingredient | Percent |
| 2,4-D | 4 | Abamectin | 12 | Chlorothalonil | 26 | Daminozide | 8 |
| Fluazifop-P-butyl | 5 | Acephate | 24 | Etridiazole | 12 | Hydrogen peroxide | 5 |
| Glyphosate | 6 | Azadirachtin | 15 | Fenhexamid | 10 | Metaldehyde | 4 |
| Isoxaben | 4 | Bifenthrin | 18 | Fludioxonil | 5 | Paclobutrazol | 9 |
| Oryzalin | 8 | Chlorpyrifos | 15 | Iprodione | 6 | Pelargonic acid | 8 |
| Oxyfluorfen | 2 | Cinnamaldehyde | 19 | Mefenoxam | 15 | Uniconazole | 3 |
| Prodiamine | 4 | Diflubenzuron | 13 | PCNB | 9 | | |
| Trifluralin | 2 | Imidacloprid | 14 | Thiophanate-methyl | 42 | | |
| | | Spinosad | 17 | Trichoderma harz. | 7 | | |

[1] Most commonly used active ingredients.

**Corn: Agricultural chemical applications, 2001 [1]**

| Agricultural chemical | Area applied | Applications | Rate per application | Rate per crop year | Total applied |
|---|---|---|---|---|---|
| | *Percent* | *Number* | *Pounds per acre* | *Pounds per acre* | *1,000 pounds* |
| Herbicides: | | | | | |
| 2,4-D | 10 | 1.0 | 0.52 | 0.52 | 111 |
| Acetochlor | 27 | 1.0 | 1.68 | 1.68 | 996 |
| Altrazine | 69 | 1.0 | 1.23 | 1.28 | 1,940 |
| Clopyralid | 22 | 1.0 | 0.09 | 0.09 | 46 |
| Dicamba | 13 | 1.0 | 0.23 | 0.24 | 70 |
| Dicamba, Dimet, salt | 3 | 1.0 | 0.08 | 0.08 | 5 |
| Diflufenzopyr-sodium | 3 | 1.0 | 0.03 | 0.03 | 2 |
| Dimethenamid | 5 | 1.0 | 1.04 | 1.04 | 111 |
| Flumetsulam | 23 | 1.0 | 0.04 | 0.04 | 18 |
| Glyphosate | 15 | 1.0 | 0.82 | 0.85 | 272 |
| Metolachlor | 6 | 1.0 | 1.33 | 1.33 | 183 |
| Nicosulfuron | 9 | 1.0 | 0.02 | 0.02 | 3 |
| Pendimethalin | 7 | 1.0 | 0.88 | 0.88 | 142 |
| Rimsulfuron | 7 | 1.0 | 0.01 | 0.01 | 2 |
| S-Metolachlor | 26 | 1.0 | 1.21 | 1.21 | 696 |
| Insecticides | | | | | |
| Chlorpyrifos | 9 | 1.0 | 1.01 | 1.01 | 191 |

[1] Planted acres in 2001 were 2.20 million acres.

**Corn: Fertilizer applications, 2001 [1]**

| Fertilizer | Symbol | Area applied | Applications | Rate per application | Rate per crop year | Total applied |
|---|---|---|---|---|---|---|
| | | *Percent* | *Number* | *Pounds per acre* | *Pounds per acre* | *Million pounds* |
| Nitrogen | N | 91 | 1.9 | 65 | 125 | 251.3 |
| Phosphate | $P_2O_5$ | 78 | 1.0 | 48 | 50 | 85.9 |
| Potash | $K_2O$ | 78 | 1.2 | 80 | 102 | 175.2 |

[1] Planted acres in 2001 were 2.20 million acres.

**Agricultural chemicals: Common and trade names by class**

| Herbicides | | Insecticides | |
|---|---|---|---|
| Common name | Trade name | Common name | Trade name |
| 2, 4-D | several names | Abamectin | Agri-Mek, Avid, Clinch Ant Bait, Zephyr |
| 2, 4-D, Dimeth. salt | Green Light, Riverdale, Saber, Trimec, Weedar, Weedaxe | Acephate | Orthene, Payload |
| | | Azadirachtin | several names |
| Acetochlor | Degree Xtra, Double Play, Field Master, Harness, Harness Plus, Surpass, TopNotch | Azinphos-methyl | Azinphos-M, Guthion, Sniper |
| | | Bt (Bacillus thur.) | several names |
| Ammonium benzadox | Topcide | Benzoic acid | Intrepid |
| Atrazine | several names | Bifenthrin | Attain, Brigade, Capture, Talstar |
| Bromoxynil | Buctril | Carbaryl | Agway Fruit Tree Spray, Carbaryl, Sevin |
| Clopyralid | Accent Gold, Confront, Curtail, Hornet, Lontrel, Stinger | Chlorpyrifos | several names |
| | | Cinnamaldehyde | Cinnamite, Valero |
| Dicamba | Banvel, Celebrity, Clarity, Fallow Master, North Star, OpTill, Resolve, Weedmaster | Clofentezine | Apollo, Ovation |
| | | Cyfluthrin | Baythroid, Decathlon, Duraplex, Tempo |
| Dicamba, Dimeth. salt | Distinct, Green Light, Riverdale, Sterling, Trimec | Diazinon | Diazinon, Knox Out, Spectracide, Spectracide 25 |
| Diflufenzopyr-sodium | Celebrity Plus, Distinct | Dicofol | Dicofol, Kelthane |
| Dimethenamid | Guardsman, Frontier, LeadOff, OpTill | Diflubenzuron | Adept, Dimilin, Micromite |
| Diuron | Direx, Diuron, Karmex, Krovar, Sprakil | Dimethoate | Cygon, Digon, Dimate, Dimethoate |
| Fluazifop-P-butyl | Fusilade, Fusion, Ornamec | Endosulfan | Endocide, Endosulfan, Phaser, Thiodan |
| Flumetsulam | Accent Gold, Bicep Magnum, Broadstike, Frontrow, Hornet, Python | Esfenvalerate | Asana |
| | | Fenpropathrin | Danitol, Tame |
| Glyphosate | several names | Fluvalinate | Mavrik |
| Hexazinone | Velpar | Hexythiazox | Hexygon, Savey |
| Isoxaben | Gallery, Snapshot | Imidaclopid | Admire, Marathon, Merit, Provado |
| MCPP, DMA, salt | Green Light, Trimec | Indoxacarb | Avaunt |
| Metolachlor | Bicep, Dual, Dual II, Pennant, Turbo | Lindane | Isotox, Lindane |
| MSMA | MSMA | Malathion | Agway Fruit Tree Spray, Cythion, Fyfanon, Green Devil, Malathion |
| Nicosulfuron | Accent, Accent Gold, Basis Gold, Celebrity, Steadfast | Methiocarb | Mesurol |
| Norflurazon | Solicam | Methomyl | Lannate |
| Oryzalin | Rout, Snapshot, Surflan | Oxydemeton-methyl | Metasystox-R |
| Oxadiazon | Pre Pair, Regal, RegalStar, Ronstar | Permethrin | Ambush, Astro, Hot Shot, LastCall, Pounce |
| Oxyfluorfen | Goal, OH 2, Regal, Rout | Petroleum distillate | several names |
| Paraquat | Cyclone, Gramoxone | Petroleum oil | Damoil Dormant Oil Spray |
| Pendimethalin | Corral, OH 2, Pendimax, Pendulum, Prowl, Pursuit Plus, Squadron, Steel, Stomp | Phosmet | Imidan |
| | | Piperonyl butoxide | several names |
| Prodiamine | Barricade, Factor, RegalStar, Regalkade | Potassium salts | several names |
| Rimsulfuron | Accent Gold, Basis, Basis Gold, Matrix, Steadfast | Pymetrozine | Endeaver |
| | | Pyridaben | Nexter, Pyramite, Sanmite |
| S-Metolachlor | several names | S-Kinoprene | Enstar II |
| Sethoxydim | Poast, Torpedo, Vantage | Spinosad | Conserve, NAF-550 Fruit Fly Bait, SpinTor, Success, Tracer |
| Simazine | Caliber, Princep, Sim-Trol, Simazine | | |
| Terbacil | Sinbar | Tebufenozide | Confirm |
| Trifluralin | Preen, Snapshot, Treflan, Trifluralin, Trilin | | |

–continued

**Agricultural chemicals: Common and trade names by class (continued)**

| Fungicides | | Fungicides (continued) | |
|---|---|---|---|
| Common name | Trade name | Common name | Trade name |
| Azoxystrobin | Abound, Heritage, ICIA5504, Quadris | Trichoderma harzianum | Planter Box, PlantShield, RootShield |
| Basic copper sulfate | several names | Trifloxystrobin | Compass, Flint |
| Benomyl | Benlate, Benomyl | Vinclozolin | Curalan, Ornalin, Ronilan, Vorlan |
| Butanone | Strike | Ziram | Ziram |
| Calcium polysulfide | Lime Sulfur Solution, Orthorix, Polysul, Sulforix | Other | |
| | | Alk. dim. benzyl 50% | Consan, Triathlon |
| Captan | Agway Fruit Spray, Captan, Captec | Alk. dim. benzyl 60% | several names |
| Chlorothalonil | several names | Alk. dim. eth. benz. | Consan, Green Shield, Physan, R.D., Triathlon |
| Copper hydroxide | several names | | |
| Copper (metallic) | Bordeaux | Ancymidol | A-Rest |
| Copper oxychloride | C-O-C-S, Microsperse | Benzyladenine | Accel, BAP, Perlan, Promalin,Typy |
| Copper oxy. sulfate | C-O-C-S, Copodust, Oxycop | Bitrex | Tree Guard |
| Copper resinate | Camelot, Copper Fungicide, Tenn-Cop | Butenoic acid hydrochlor. | Retain |
| Copper sulfate | Basicop, Bluestone, Copper Sulfate, Magna-Bon, Pro- Teck, Phyton, Polydex | Butyl mercapten | Scoot |
| | | Capsaicin | Hot Pepper Wax, Hot Sauce Animal Repellent, Scoot |
| Cyprodinil | Switch, Vangurad | Chlormequat chloride | Cycocel |
| Dodine | Cyprex, Dodine, Syllit | Daminozide | B-Nine |
| Etridiazole | Banrot, Terraclor, Truban | Diphacinone | Diphacinone, Ramik |
| Fenarimol | Lesco, Rubigon | E-8-Dodecenyl acetate | Checkmate, Consep, Isomate |
| Fenbuconazole | Enable, Indar | Ethephon | Ethrel, Floral, Prep |
| Fenhexamid | Decree, Elevate | Gibberellic acid | Falgro, GibGro, Gibbex, Pro-Gibb, ProVide, RyzUp |
| Ferbam | Carbamate, Ferbam | | |
| Fludioxonil | Medallion, Switch | Gibberellins A4A7 | Accel, Perlan, Promalin, TypRus, Typy |
| Fosetyl-al | Aliette, Prodigy | | |
| Iprodione | Benefit, Chipco, Rovral | Gliocladium virens | SoilGard |
| Kresoxim-methyl | Cygnus, Sovran | Hydrogen peroxide | Oxidate, Zerotol |
| Mancozeb | several names | Indolebutyric acid | Dip'n Grow, Early Harvest, Hormex, Hormodin |
| Mefenoxam | Flouronil, Quell, Ridomil, Subdue | | |
| Metalaxyl | Pythium, Ridomil, Subdue | Metaldehyde | Deadline, Metaldehyde, Slug Bait, Slug-Fest, Trail's End |
| Metiram | Polyram | | |
| Myclobutanil | Eagle, Laredo, Nova, Rally, RH-144228, Systhane | Metam-sodium | Metam Sodium, Sectagon, Vapam |
| | | Methyl bromide | MBC-33, Methyl Bromide, Methyl Bromide & Chloropicrin, Tri-con |
| Oxytetracycline | Mycoshield | | |
| PCNB | Defend, PCNB, Terraclor, Terraguard, Turfcide | NAA | several names |
| | | Octadecadien (E,Z) | Isomate |
| Piperalin | Pipron | Octadecadien (Z,Z) | Isomate |
| Potassium bicarbonate | Armicarb, FirstStep, Kaligreen | Paclobutrazol | Bonzi |
| Propiconazole | Banner, Orbit, Tilt | Pelargonic acid | Scythe, Thinnex |
| Streptomycin | Agri-Mycin, Streptomycin | Prohexadione calcium | Apogee |
| Sulfur | several names | Uniconazole | Sumagic |
| Tebuconazole | Elite, Folicur | Z-8-Dodecanol | Checkmate, Consep, Isomate |
| Thiophanate | Banrot, Cleary, Consyst, Fungo | Z-8-Dodecenyl acetate | Checkmate, Consep, Isomate |
| Thiophanate-methyl | Duosan, Fungo Flo, Systec, Topsin, Zyban | Zinc phosphide | Zinc Phosphide |
| Thiram | Rootone, Thiram | | |
| Triadimefon | Bayleton, Reach | | |

**Commercial fertilizer consumption: 1997-2001** [1]

| Item | Year ending June 30 | | | | |
|---|---|---|---|---|---|
| | 1997 | 1998 | 1999 | 2000 | 2001 |
| | *Short tons* | *Short tons* | *Short tons* | *Short tons* | *Short tons* |
| Primary plant nutrients | | | | | |
| Total N | 275,600 | 248,102 | 263,948 | 249,543 | 238,810 |
| N in multi-nutrients | 64,017 | 58,790 | 62,713 | 57,104 | 55,076 |
| Total $P_2O_5$ | 112,286 | 92,236 | 94,890 | 87,001 | 83,794 |
| $P_2O_5$ in multi-nutrients | 101,154 | 90,323 | 92,063 | 84,539 | 83,794 |
| Total $K_2O$ | 246,467 | 213,954 | 211,739 | 202,481 | 184,568 |
| $K_2O$ in multi-nurtrients | 77,110 | 66,246 | 60,635 | 47,828 | 47,563 |
| Total plant nutrients | 634,354 | 554,291 | 570,576 | 539,024 | 509,251 |
| Average analysis | 44.5 | 44.8 | 43.1 | 42.9 | 42.6 |
| Total nutrients in multi-nutrients | 242,281 | 215,360 | 215,411 | 189,471 | 186,433 |
| Selected single-nutrient materials | | | | | |
| Ammonium nitrate | 9,401 | 6,483 | 9,533 | 5,622 | 6,287 |
| Anhydrous ammonia | 88,775 | 71,765 | 68,349 | 56,757 | 50,984 |
| Nitrogen solutions | 260,369 | 269,136 | 300,761 | 265,544 | 288,641 |
| Urea | 87,173 | 88,167 | 98,820 | 126,452 | 110,001 |
| Ammonium sulfate | 71,007 | 20,168 | 20,468 | 22,477 | 22,164 |
| Concentrated superphosphate | 5,202 | 3,961 | 4,880 | 4,966 | 3,945 |
| Potassium chloride | 271,868 | 237,257 | 244,519 | 250,410 | 221,427 |
| Multiple-nutrient fertilizers | | | | | |
| N-P-K | 434,859 | 387,053 | 388,303 | 361,992 | 366,861 |
| N-P | 125,241 | 115,178 | 124,833 | 115,616 | 122,840 |
| N-K | 31,768 | 26,527 | 27,386 | 22,281 | 24,353 |
| P-K | 11,435 | 7,891 | 5,526 | 4,561 | 4,771 |
| Leading multiple-nutrient grades | | | | | |
| 10-34-0 | 40,220 | 35,525 | 42,668 | 37,385 | 40,775 |
| 18-46-0 | 42,223 | 36,974 | 37,709 | 34,569 | 33,232 |
| 11-52-0 | 8,682 | 14,860 | 20,069 | 24,987 | 26,571 |
| 19-19-19 | 20,139 | 18,527 | 21,201 | 11,564 | 13,035 |
| 9-24-3 | | 2,917 | | 8,510 | 9,150 |
| 6-24-24 | 13,385 | 10,375 | 12,529 | 7,891 | 7,576 |
| Fertilizer consumption by classes | | | | | |
| Dry bulk single-nutrient | 490,328 | 401,282 | 430,931 | 452,227 | 382,845 |
| Dry bagged single-nutrient | 8,820 | 9,267 | 7,581 | 7,453 | 14,862 |
| Fluid single-nutrient | 369,706 | 348,333 | 371,425 | 324,357 | 343,883 |
| Dry bulk multiple-nutrient | 349,906 | 293,499 | 283,761 | 259,482 | 243,576 |
| Dry bagged multiple-nutrient | 174,006 | 179,578 | 187,767 | 165,491 | 188,375 |
| Fluid multiple-nutrient | 79,392 | 63,570 | 76,463 | 79,476 | 86,874 |
| Organics, secondary and micronutrients | 20,345 | 38,839 | 37,943 | 39,220 | 24,729 |
| Total | 1,492,503 | 1,334,370 | 1,395,870 | 1,327,707 | 1,285,144 |

[1] Source: The Association of American Plant Food Control Officials

# Field Crops

## Growing Season Weather Summary

Dr. Jeff Andresen, Michigan State University

Weatherwise, the 2001 growing season was characterized by extremes of water availability, initially as too much and later in the season, by too little. Drought and moisture stress plagued crops in much of the Great Lakes region to some extent, especially during the months of July and August. The drought conditions were very ill-timed in an agricultural sense because they coincided with stages of greatest water needs for many crops. From late April through early June, much of the region experienced persistent heavy rain and ironically, some flooding. For example, more than 10 inches of rain fell in the Grand Rapids area during May alone, a new record total for the month. The early wetness in these areas delayed planting of summer crops and resulted in shallower than normal rooting systems for crops already established.

A major change in the configuration of the jet steam across North America in mid-June led to a much drier weather pattern which persisted from late June through mid-August. Given normal monthly precipitation totals in the State ranging from 2.8 to 3.6 inches, the rainfall deficit at Lansing by mid-August was likely at least 3 inches. Dryness and moisture stress conditions were most intense in northern and eastern sections of the State, with less than 25 percent of normal precipitation totals in many sections of the northern and eastern Lower Peninsula during July and early August. In some of the Thumb and Saginaw Valley regions no rain fell from late June through early August. NOAA's Palmer drought index, which characterizes long term, hydrological surpluses and deficits, categorized conditions in this area during much of late July and August as 'moderate to severe drought'. In many of the worst impacted areas, precipitation deficits of 3 to 6 inches or more were common by mid-August. In a meteorological sense, the drought was associated with a large, persistent upper air ridge across the Upper Midwest and warm, dry air aloft, which effectively inhibited convection across the State. This is the reason a series of rainfall-bearing weather disturbances moving into Michigan from the west rapidly dissipated as they moved into the State, with only sprinkles or light rainfall totals. The abnormal dryness in Michigan was part of a regional pattern, stretching from Michigan eastward through southern Ontario, sections of Ohio, Pennsylvania, New York and into New England.

In terms of timing, the drought impacted many summer crops during moisture-sensitive growth stages and/or stages of greatest water need (including silk/pollination for corn), leading to moisture stress which peaked in the first half of August. Reported crop damage was highly variable from area to area, with some spots benefitting from very timely rains and/or from soil profiles with greater stored water availability. Plant available moisture from the top 6 feet of the soil profile at field capacity typically ranges from 3 to 8 inches for soils in the region.

A return to an upper air ridging pattern across the Midwest during late September and much of October brought warmer, drier weather, which when combined with a later than normal first killing freeze of the fall allowed many crops slowed by earlier cool temperatures to reach maturity. Overall, for the 5-month May to September period, mean temperatures and growing degree day accumulations ranged from near to below normal statewide. Precipitation was highly variable, ranging from below normal totals in northern sections of the State to much above normal levels in the south.

**Field crops: Acres harvested and value of production, 1997-2001**

| Item | Unit | 1997 | 1998 | 1999 | 2000 | 2001 |
|---|---|---|---|---|---|---|
| Acres harvested | 1,000 acres | 6,740 | 6,653 | 6,730 | 6,593 | 6,435 |
| Value of production | 1,000 dollars | 1,892,458 | 1,503,206 | 1,569,098 | 1,428,981 | 1,244,058 |

**Grain storage capacity, December 1, 1997-2001**

| Year | Off farm | | On farm capacity |
|---|---|---|---|
| | Facilities | Rated capacity | |
| | *Number* | *Million bushels* | *Million bushels* |
| 1997 | 289 | 146 | 250 |
| 1998 | 286 | 143 | 270 |
| 1999 | 270 | 141 | 280 |
| 2000 | 250 | 141 | 280 |
| 2001 | 245 | 146 | 280 |

## Field crops: Record highs and lows

| Crop | Unit | Record high | | Record low | | Year estimates started |
|---|---|---|---|---|---|---|
| | | Quantity | Year | Quantity | Year | |
| **Barley** | | | | | | |
| Harvested acres | 1,000 acres | 303 | 1932 | 16 | 1974 | 1866 |
| Yield per acre | Bushels | 68.0 | 1985 | 13.5 | 1933 | |
| Production | 1,000 bu | 8,400 | 1918 | 546 | 1866 | |
| **Dry Edible beans** | | | | | | |
| Harvested acres | 1,000 acres | 690 | 1930 | 130 | 2001 | 1909 |
| Yield per acre | Pounds | 2,100 | 1999 | 320 | 1917 | |
| Production | 1,000 cwt | 8,585 | 1963 | 780 | 2001 | |
| **Corn for grain** | | | | | | |
| Harvested acres | 1,000 acres | 2,800 | 1981 | 480 | 1866 | 1866 |
| Yield per acre | Bushels | 130.0 | 1999 | 21.5 | 1917 | |
| Production | 1,000 bu | 293,180 | 1982 | 15,120 | 1869 | |
| **Corn for silage** | | | | | | |
| Harvested acres | 1,000 acres | 498 | 1971 | 211 | 1942 | 1924 |
| Yield per acre | Tons | 17.5 | 1999 | 4.7 | 1930 | |
| Production | 1,000 tons | 5,565 | 1977 | 1,542 | 1930 | |
| **Hay, alfalfa** | | | | | | |
| Harvested acres | 1,000 acres | 1,444 | 1950 | 74 | 1919 | 1919 |
| Yield per acre | Tons | 4.2 | 1993 | 1.1 | 1934 | |
| Production | 1,000 tons | 5,040 | 1985,1986 | 118 | 1919 | |
| **Hay, all** | | | | | | |
| Harvested acres | 1,000 acres | 2,947 | 1924 | 780 | 1866 | 1866 |
| Yield per acre | Tons | 3.8 | 1993 | 0.6 | 1895 | |
| Production | 1,000 tons | 5,743 | 1986 | 1,014 | 1866 | |
| **Oats** | | | | | | |
| Harvested acres | 1,000 acres | 1,658 | 1918 | 55 | 2001 | 1866 |
| Yield per acre | Bushels | 67.0 | 1985,1989 | 18.5 | 1921 | |
| Production | 1,000 bu | 69,388 | 1946 | 3,520 | 2001 | |
| **Potatoes** | | | | | | |
| Harvested acres | 1,000 acres | 374.0 | 1895 | 36.4 | 1975 | 1866 |
| Yield per acre | Cwt | 315.0 | 1998,1999,2000 | 26.0 | 1887,1916 | |
| Production | 1,000 cwt | 23,256 | 1904 | 3,557 | 1876 | |
| **Soybeans** | | | | | | |
| Harvested acres | 1,000 acres | 2,130 | 2001 | 1 | 1930 | 1924 |
| Yield per acre | Bushels | 40.0 | 1995,1999 | 8.0 | 1927 | |
| Production | 1,000 bu | 77,600 | 1999 | 10 | 1930 | |
| **Spearmint** | | | | | | |
| Harvested acres | 1,000 acres | 8.7 | 1954 | 0.7 | 1935 | 1935 |
| Yield per acre | Pounds | 50.0 | 2001 | 20.0 | 1965 | |
| Production | 1,000 lbs | 280 | 1948 | 27 | 1996 | |
| **Sugarbeets** | | | | | | |
| Harvested acres | 1,000 acres | 190 | 1999 | 48 | 1943,1953 | 1909 |
| Yield per acre | Tons | 21.3 | 1970 | 5.5 | 1916 | |
| Production | 1,000 tons | 3,534 | 1999 | 298 | 1943 | |
| **Wheat, winter** | | | | | | |
| Harvested acres | 1,000 acres | 1,515 | 1953 | 400 | 1987 | 1909 |
| Yield per acre | Bushels | 72.0 | 2000 | 10.5 | 1912 | |
| Production | 1,000 bu | 45,600 | 1984 | 7,350 | 1912 | |

# Barley

Michigan barley growers planted 21,000 acres and harvested 18,000 acres in 2001. This represented a 5 percent decrease in the number of acres planted and harvested. Total production was 1.01 million bushels, down 12 percent from 2000. The average yield decreased 4 bushels to 56 bushels per acre. Barley planting was completed by early June. Rainfall through mid-June was above normal and the crop responded well. Hot, dry weather in August was favorable for harvest. Menominee, Delta, Sanilac, and Huron counties were the top four barley producing counties in the State.

**Barley: Acres, yield, production, and value, 1997-2001**

| Year | Planted | Harvested | Yield | Production | Price [1] | Value of production |
|---|---|---|---|---|---|---|
| | *1,000 acres* | *1,000 acres* | *Bushels* | *1,000 bushels* | *Dollars* | *1,000 dollars* |
| 1997 | 25 | 22 | 58 | 1,276 | 1.90 | 2,424 |
| 1998 | 27 | 23 | 50 | 1,150 | 1.50 | 1,725 |
| 1999 | 23 | 21 | 66 | 1,386 | 1.70 | 2,356 |
| 2000 | 20 | 19 | 60 | 1,140 | 1.10 | 1,254 |
| 2001 | 21 | 18 | 56 | 1,008 | 1.50 | 1,500 |

[1] Marketing year average.

# Corn

Michigan had 2.2 million acres planted to corn in 2001, the same as in 2000. Grain corn production was 199.5 million bushels, down 18 percent from 2000; 1.90 million acres were harvested for grain. The yield of 105 bushels per acre was down 19 bushels from the 2000 crop. Michigan ranked eleventh among states in corn for grain production. Farmers harvested 280,000 acres of corn for silage with an average yield of 13.0 tons per acre.

Planting of corn in Michigan began in earnest the last week of April. Extremely heavy rains slowed progress the second week of May and necessitated substantial replanting. Nevertheless, progress was ahead of average throughout May, and planting was completed on schedule by mid-June. The majority of the emerged planted acres was yellowed from cool soil temperatures and wet conditions. Post-emergence herbicides had to be applied to compensate for pre-emergence herbicides that had been washed out of the soils.

Michigan's corn for grain potential was slashed by July moisture shortages. Curling leaves were a common sight when much of the crop was in the crucial pollination stage.

Above normal temperatures and insignificant precipitation continued until mid-August. August rains came after most pollination and ear formation had occurred. Plant growth was below normal, ears were short, and, in many cases, not filled.

Combining of Michigan's corn drought-decimated crop began on schedule the last week of September. Plant development was at the normal level, but only one-fifth of the crop was rated in good to excellent condition. Harvest was about 40 percent done by November 1, near the normal pace. Combining was slowed in late October by heavy rainfall, which caused lodging in some areas. The harvest weather improved in November, and 90 percent of the crop was combined by the end of the month, meeting the normal schedule. Abandonment was above normal, and substantial acreage intended for grain was harvested for silage

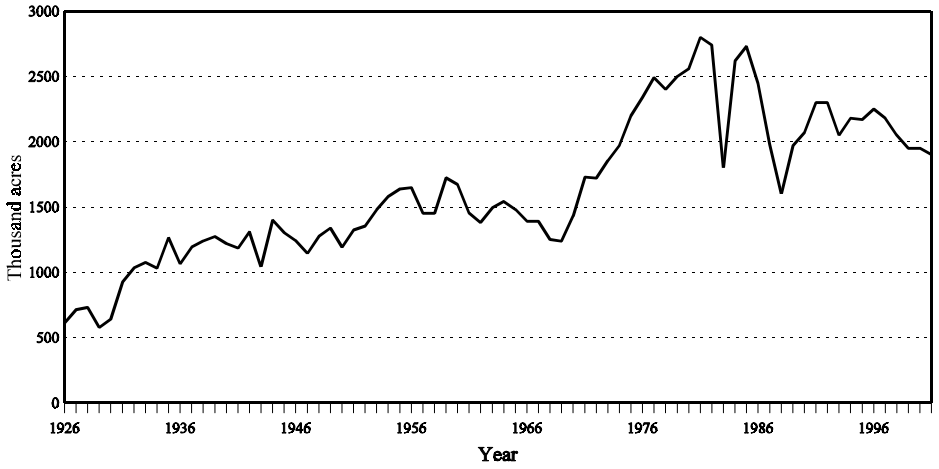
The 2001 corn crop was valued at $379 million, down 18 percent from 2000. Corn continued to be Michigan's number one crop in value of production. The top five counties in corn production in 2001 were Lenawee, St. Joseph, Branch, Allegan, and Gratiot.

**Corn: Acres, yield, production, and value, 1997-2001**

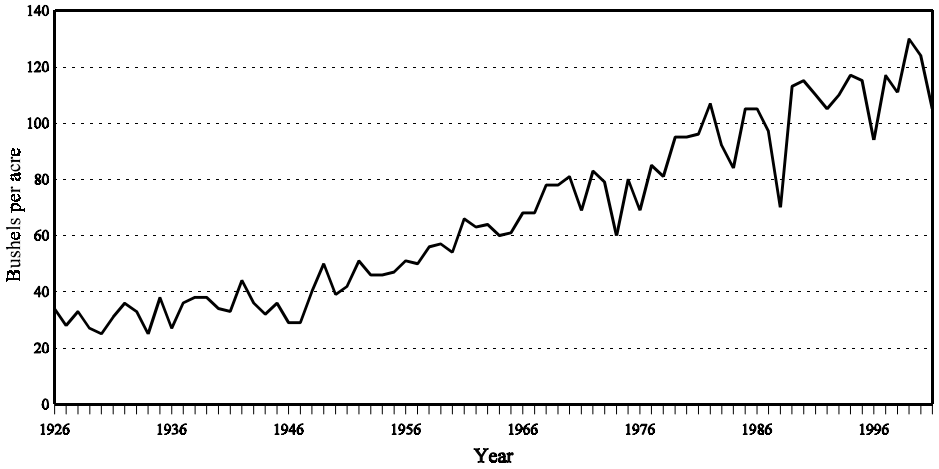
| Year | Planted | Harvested | Yield | Production | Price [1] | Value of production |
|---|---|---|---|---|---|---|
| | *1,000 acres* | *1,000 acres* | *Bushels* | *1,000 bushels* | *Dollars* | *1,000 dollars* |
| All | | | | | | |
| 1997 | 2,500 | | | | | |
| 1998 | 2,300 | | | | | |
| 1999 | 2,200 | | | | | |
| 2000 | 2,200 | | | | | |
| 2001 | 2,200 | | | | | |
| Grain | | | | | | |
| 1997 | | 2,180 | 117 | 255,060 | 2.40 | 612,144 |
| 1998 | | 2,050 | 111 | 227,550 | 1.90 | 432,345 |
| 1999 | | 1,950 | 130 | 253,500 | 1.78 | 451,230 |
| 2000 | | 1,950 | 124 | 241,800 | 1.90 | 459,420 |
| 2001 | | 1,900 | 105 | 199,500 | 1.90 | 379,050 |
| | *1,000 acres* | *1,000 acres* | *Tons* | *1,000 tons* | | |
| Silage | | | | | | |
| 1997 | | 300 | 14.5 | 4,350 | | |
| 1998 | | 240 | 12.5 | 3,000 | | |
| 1999 | | 235 | 17.5 | 4,113 | | |
| 2000 | | 230 | 14.0 | 3,220 | | |
| 2001 | | 280 | 13.0 | 3,640 | | |

[1] Marketing year average.

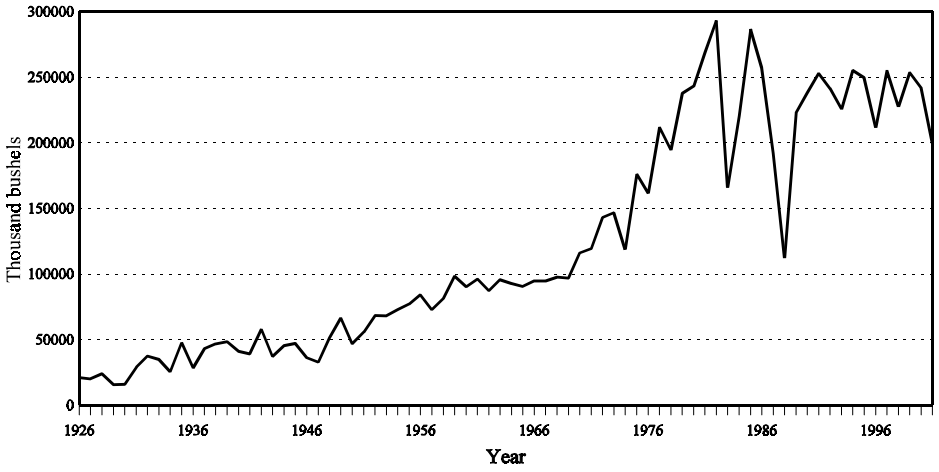
## Corn for grain acres, 1926-2001




## Corn yield, 1926-2001




## Corn production, 1926-2001



**Corn for grain: Stocks by quarter, 1997-2001**

| Crop year | December 1 | | March 1 | | June 1 | | September 1 | |
|---|---|---|---|---|---|---|---|---|
| | On farm | Off farm | On farm | Off farm | On farm | Off farm | On farm | Off farm |
| | *1,000 bushels* | *1,000 bushels* | *1,000 bushels* | *1,000 bushels* | *1,000 bushels* | *1,000 bushels* | *1,000 bushels* | *1,000 bushels* |
| 1997 | 150,000 | 55,615 | 80,000 | 53,870 | 46,000 | 30,017 | 22,000 | 15,223 |
| 1998 | 150,000 | 59,500 | 90,000 | 44,200 | 58,000 | 21,000 | 22,000 | 13,650 |
| 1999 | 135,000 | 68,300 | 95,000 | 49,700 | 53,000 | 30,500 | 26,000 | 15,000 |
| 2000 | 145,000 | 58,200 | 90,000 | 46,800 | 55,000 | 24,800 | 21,000 | 11,900 |
| 2001 | 120,000 | 55,400 | 80,000 | 46,700 | 54,000 | 26,750 | | |

**Corn: Percentage of acreage planted, 1997-2001**

| Year | Month and day | | | | | |
|---|---|---|---|---|---|---|
| | April | | May | | | June |
| | 20 | 30 | 10 | 20 | 30 | 10 |
| 1997 | 0 | 15 | 48 | 67 | 88 | 98 |
| 1998 | 0 | 20 | 50 | 88 | 96 | 100 |
| 1999 | 0 | 5 | 46 | 80 | 94 | 99 |
| 2000 | 0 | 3 | 39 | 69 | 84 | 92 |
| 2001 | 0 | 14 | 62 | 81 | 93 | 100 |
| 5-year-average | 0.0 | 11.4 | 49.0 | 77.0 | 91.0 | 97.8 |

**Corn: Percentage of acreage silked, 1997-2001**

| Year | Month and day | | | | | |
|---|---|---|---|---|---|---|
| | July | | | | August | |
| | 1 | 10 | 20 | 30 | 10 | 20 |
| 1997 | 0 | 0 | 3 | 33 | 83 | 99 |
| 1998 | 0 | 11 | 40 | 79 | 95 | 100 |
| 1999 | 0 | 10 | 46 | 88 | 100 | 100 |
| 2000 | 0 | 1 | 15 | 53 | 81 | 94 |
| 2001 | 0 | 2 | 22 | 66 | 91 | 100 |
| 5-year-average | 0.0 | 4.8 | 25.2 | 63.8 | 90.0 | 98.6 |

**Corn: Percentage of acreage dent stage, 1997-2001**

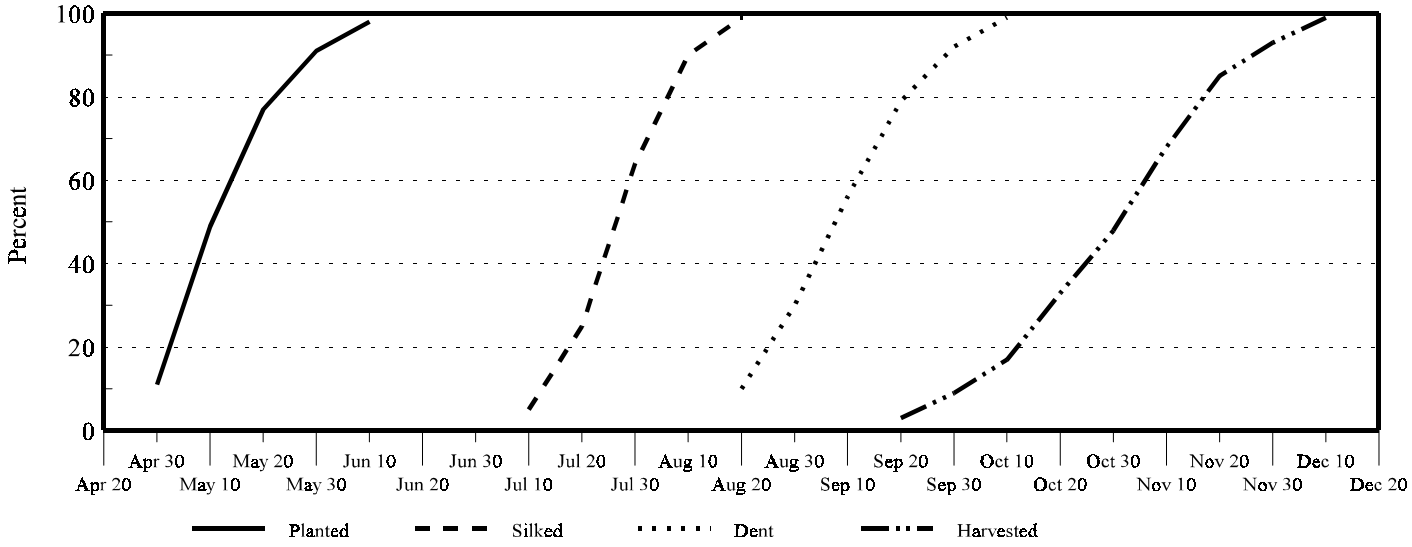
| Year | Month and day | | | | | | |
|---|---|---|---|---|---|---|---|
| | August | | | September | | | October |
| | 10 | 20 | 30 | 10 | 20 | 30 | 10 |
| 1997 | 0 | 0 | 4 | 20 | 55 | 80 | 97 |
| 1998 | 0 | 19 | 60 | 90 | 94 | 100 | 100 |
| 1999 | 0 | 17 | 50 | 85 | 97 | 100 | 100 |
| 2000 | 0 | 3 | 10 | 33 | 73 | 86 | 98 |
| 2001 | 0 | 10 | 25 | 52 | 76 | 93 | 98 |
| 5-year-average | 0.0 | 9.8 | 29.8 | 56.0 | 79.0 | 91.8 | 98.6 |

**Corn: Percentage of acreage harvested for grain, 1997-2001**

| Year | Month and day | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | September | | | October | | | November | | | December |
| | 10 | 20 | 30 | 10 | 20 | 30 | 10 | 20 | 30 | 10 |
| 1997 | 0 | 0 | 1 | 4 | 7 | 11 | 31 | 62 | 80 | 97 |
| 1998 | 0 | 5 | 19 | 32 | 55 | 71 | 87 | 98 | 100 | 100 |
| 1999 | 2 | 7 | 13 | 28 | 50 | 76 | 89 | 96 | 99 | 100 |
| 2000 | 0 | 0 | 3 | 8 | 24 | 40 | 70 | 81 | 94 | 100 |
| 2001 | 0 | 3 | 7 | 14 | 27 | 41 | 62 | 87 | 94 | 100 |
| 5-year-average | 0.4 | 3.0 | 8.6 | 17.2 | 32.6 | 47.8 | 67.8 | 84.8 | 93.4 | 99.4 |

## Corn progress

Five-year-average, 1997-2001




# Dry Edible Beans

Michigan's 2001 dry bean production was decimated by drought conditions with little rain from mid-June through mid-August. Rain finally came in late August after most of the crop could benefit and damaged the quality of the already short crop. Many fields had re-growth, which was still developing when hit by frost on October 7 and 8. This is the lowest yield since 1936 and the lowest production on record, dating back to 1909.

Michigan's 2001 total dry bean production was 780,000 hundredweight (cwt) which represents 4 percent of US production. Michigan ranked seventh in dry bean production for 2001, compared to second last year. The number one dry bean producer in the nation was North Dakota with 6,200,000 cwt.

Michigan continues to lead the country in Cranberry and Black bean production. Michigan dry beans are consumed throughout the world and are largely shipped to the United Kingdom, Japan, France, Mexico, and Italy.

**Dry edible beans: Acres, yield, production, and value, 1997-2001**

| Year | Planted | Harvested | Yield | Production | Price [1] | Value of production |
|---|---|---|---|---|---|---|
| | *1,000 acres* | *1,000 acres* | *Cwt* | *1,000 cwt* | *Dol/cwt* | *1,000 dollars* |
| 1997 | 315 | 305 | 1,620 | 4,941 | 18.90 | 93,385 |
| 1998 | 300 | 295 | 1,500 | 4,425 | 21.60 | 95,580 |
| 1999 | 350 | 350 | 2,100 | 7,350 | 16.80 | 123,480 |
| 2000 | 285 | 275 | 1,500 | 4,125 | 13.70 | 56,500 |
| 2001 | 215 | 130 | 600 | 780 | 24.30 | 19,000 |

[1] Marketing year average.

**Dry edible beans: Stocks in commercial elevators, 1997-2001**

| Month and Year | Navy | All other | Total |
|---|---|---|---|
| | *1,000 cwt* | *1,000 cwt* | *1,000 cwt* |
| December 31 | | | |
| 1997 | 2,850 | 1,700 | 4,550 |
| 1998 | 1,400 | 2,100 | 3,500 |
| 1999 | 2,900 | 2,900 | 5,800 |
| 2000 | 2,800 | 2,500 | 5,300 |
| August 31 | | | |
| 1997 | 1,530 | 240 | 1,770 |
| 1998 | 1,050 | 180 | 1,230 |
| 1999 | 210 | 720 | 930 |
| 2000 | 1,850 | 1,750 | 3,600 |
| 2001 [1] | 1,500 | 800 | 2,300 |

[1] Final dry bean stocks report. The Michigan Bean Commission and the Michigan Bean Shippers Association requested discontinuation of this report. The Michigan Department of Agriculture concluded that the report should be discontinued. The report had been issued twice a year since 1983.

**Dry edible beans: Acres, yield, and production, by class, 1997-2001**

| Class and Year | Planted | Harvested | Yield | Production |
|---|---|---|---|---|
| | *Acres* | *Acres* | *Pounds* | *1,000 cwt* |
| Black | | | | |
| 1997 | 80,000 | 78,000 | 1,790 | 1,400 |
| 1998 | 135,000 | 134,000 | 1,570 | 2,100 |
| 1999 | 108,000 | 108,000 | 2,090 | 2,260 |
| 2000 | 55,000 | 53,000 | 1,580 | 840 |
| 2001 | 63,000 | 52,000 | 640 | 335 |
| Cranberry | | | | |
| 1997 | 32,000 | 31,000 | 1,680 | 520 |
| 1998 | 27,000 | 26,000 | 1,100 | 285 |
| 1999 | 31,000 | 31,000 | 1,600 | 496 |
| 2000 | 26,000 | 25,000 | 1,520 | 380 |
| 2001 | 26,000 | 12,000 | 580 | 70 |
| Great Northern | | | | |
| 2001 | 8,000 | 3,500 | 570 | 20 |
| Navy | | | | |
| 1997 | 150,000 | 145,000 | 1,580 | 2,290 |
| 1998 | 75,000 | 74,000 | 1,600 | 1,180 |
| 1999 | 150,000 | 150,000 | 2,300 | 3,450 |
| 2000 | 125,000 | 120,000 | 1,500 | 1,800 |
| 2001 | 65,000 | 30,000 | 570 | 170 |
| Pinto | | | | |
| 1997 | 10,000 | 10,000 | 1,400 | 140 |
| 1998 | 21,000 | 20,000 | 1,470 | 293 |
| 1999 | 9,000 | 9,000 | 1,890 | 170 |
| 2000 | 21,000 | 20,000 | 1,450 | 290 |
| 2001 | 7,000 | 4,500 | 510 | 23 |
| Red kidney, dark | | | | |
| 1997 | 12,000 | 11,500 | 1,040 | 120 |
| 1998 | 9,000 | 9,000 | 1,000 | 90 |
| 1999 | 9,000 | 9,000 | 1,700 | 153 |
| 2000 | 12,000 | 12,000 | 1,520 | 182 |
| 2001 | 9,000 | 7,000 | 430 | 30 |
| Red kidney, light | | | | |
| 1997 | 14,000 | 14,000 | 1,640 | 230 |
| 1998 | 14,000 | 13,000 | 1,310 | 170 |
| 1999 | 17,000 | 17,000 | 1,800 | 306 |
| 2000 | 19,000 | 19,000 | 1,500 | 285 |
| 2001 | 18,000 | 11,000 | 770 | 85 |
| Small, red | | | | |
| 1997 | 10,000 | 9,000 | 1,670 | 150 |
| 1998 | 11,000 | 11,000 | 1,820 | 200 |
| 1999 | 15,000 | 15,000 | 2,070 | 310 |
| 2000 | 8,000 | 8,000 | 1,410 | 113 |
| 2001 | 12,000 | 6,500 | 420 | 27 |
| Other | | | | |
| 1997 | 7,000 | 6,500 | 1,400 | 91 |
| 1998 | 8,000 | 8,000 | 1,340 | 107 |
| 1999 | 11,000 | 11,000 | 1,860 | 205 |
| 2000 | 19,000 | 18,000 | 1,310 | 235 |
| 2001 | 7,000 | 3,500 | 570 | 20 |

# Hay and Haylage

Michigan hay production was estimated at 3.8 million tons, down 12 percent from 2000. Alfalfa and alfalfa mixtures accounted for 85 percent of all dry hay produced. All hay harvested acres fell to 1.15 million, down from 1.3 million the previous year. The average all hay yield was 3.3 tons per acre, down 0.03 tons from 2000. Early season growing conditions were excellent for alfalfa. During the first cutting of alfalfa,`1 most growers reported average to poor quality with big yields. Quality of the second cutting was excellent but abnormally dry summer conditions reduced growth. Alfalfa and alfalfa mixtures accounted for 900,000 acres of the total with a yield of 3.6 tons per acre. Other hay accounted for 250,000 acres with a yield of 2.2 tons per acre. Value of the hay crop was $264.3 million, down 3 percent from 2000.

**Hay, haylage, and greenchop: Acres, yield, production, and value, 1997-2001**

| Year | Planted | Harvested | Yield | Production | Price [1] | Value of production |
|---|---|---|---|---|---|---|
| | *1,000 acres* | *1,000 acres* | *Tons* | *1,000 tons* | *Dollars* | *1,000 dollars* |
| All dry hay | | | | | | |
| 1997 | | 1,250 | 3.01 | 3,760 | 86.00 | 378,530 |
| 1998 | | 1,250 | 2.85 | 3,565 | 89.00 | 306,410 |
| 1999 | | 1,300 | 3.40 | 4,415 | 69.00 | 305,805 |
| 2000 | | 1,300 | 3.33 | 4,330 | 62.50 | 272,040 |
| 2001 | | 1,150 | 3.30 | 3,790 | 69.50 | 264,325 |
| Alfalfa hay | | | | | | |
| 1997 | | 900 | 3.40 | 3,060 | 103.00 | 315,180 |
| 1998 | | 850 | 3.30 | 2,805 | 90.00 | 252,450 |
| 1999 | | 950 | 3.80 | 3,610 | 72.00 | 259,920 |
| 2000 | | 1,000 | 3.70 | 3,700 | 64.50 | 238,650 |
| 2001 | | 900 | 3.60 | 3,240 | 72.50 | 234,900 |
| Alfalfa seedings | | | | | | |
| 1997 | 160 | | | | | |
| 1998 | 95 | | | | | |
| 1999 | 100 | | | | | |
| 2000 | 140 | | | | | |
| 2001 | 100 | | | | | |
| Other hay | | | | | | |
| 1997 | | 350 | 2.00 | 700 | 90.50 | 63,350 |
| 1998 | | 400 | 1.90 | 760 | 71.00 | 53,960 |
| 1999 | | 350 | 2.30 | 805 | 57.00 | 45,885 |
| 2000 | | 300 | 2.10 | 630 | 53.00 | 33,390 |
| 2001 | | 250 | 2.20 | 550 | 53.50 | 29,425 |
| All haylage and greenchop | | | | | | |
| 2000 | | 310 | 5.76 | 1,785 | | |
| 2001 | | 340 | 5.82 | 1,980 | | |
| Alfalfa haylage and greenchop | | | | | | |
| 2000 | | 280 | 6.00 | 1,680 | | |
| 2001 | | 320 | 6.00 | 1,920 | | |

[1] Marketing year average.

**Hay: Stocks on farms, 1998-2002**

| Year | May 1 | December 1 |
|---|---|---|
| | *1,000 tons* | *1,000 tons* |
| 1998 | 414 | 2,093 |
| 1999 | 566 | 2,110 |
| 2000 | 1,170 | 3,460 |
| 2001 | 1,000 | 3,450 |
| 2002 | 811 | |

# Maple Syrup

Michigan maple syrup production was estimated at 66,000 gallons for the 2002 season, 6,000 gallons above the 2001 output. This season was moderate for the production of quality syrup. Sugar content of the sap was lower and the syrup was darker in color than last year.

Michigan ranked seventh in maple syrup production in 2002, the same as the last two years, and produced about 6 percent of the total U.S. production. The tapping season started this year on March 2nd and ended April 3rd for most producers. Total taps were 320,000 and the syrup yield in gallons was 0.206 per tap. In 2001, Michigan producers sold 68 percent of their syrup retail, 19 percent wholesale, and 13 percent bulk. The average price per gallon for 2001 was $31.40 compared with $35.10 in 2000. The value of production for 2001 was $1.9 million, up 22 percent from 2000. Publication of current year preliminary price and value was discontinued due to requests from the syrup industry.

**Maple syrup: Taps, yield, production, price, and value, 1998-2002**

| Year | Taps | Yield per tap | Production | Price per gallon | Value of production |
|---|---|---|---|---|---|
| | *1,000* | *Gallons* | *1,000 gallons* | *Dollars* | *1,000 dollars* |
| 1998 | | | 55 | 32.00 | 1,760 |
| 1999 | | | 73 | 28.20 | 2,058 |
| 2000 | | | 44 | 35.10 | 1,544 |
| 2001 | 332 | 0.181 | 60 | 31.40 | 1,884 |
| 2002 | 320 | 0.206 | 66 | ([1]) | ([1]) |

[1] Published in June 2003.

# Mint

**Mint: Acres, yield, production, and value, 1997-2001**

| Year | Harvested | Yield | Production | Price per pound [1] | Value of production |
|---|---|---|---|---|---|
| | *1,000 acres* | *Pounds* | *1,000 Pounds* | *Dollars* | *1,000 dollars* |
| Peppermint | | | | | |
| 2000 | 1.0 | 50 | 50 | 9.20 | 450 |
| 2001 | 1.0 | 50 | 50 | 9.90 | 500 |
| Spearmint | | | | | |
| 1997 | 1.5 | 34 | 51 | 11.00 | 561 |
| 1998 | 1.7 | 42 | 71 | 11.20 | 795 |
| 1999 | 1.7 | 40 | 68 | 10.00 | 680 |
| 2000 | 1.7 | 45 | 77 | 9.20 | 708 |
| 2001 | 1.7 | 50 | 85 | 9.80 | 800 |

[1] Marketing year average.

# Oats

Oat acreage decreased in Michigan during 2001. Growers planted 70,000 acres of oats in 2001 compared with 95,000 the year before. Harvested acres, at 55,000, were down 20,000 from last year. The 2001 oat production was 3.52 million bushels, down 27 percent from the previous year. Yields remained the same as 2000, at 64 bushels per acre. Michigan oat harvest was completed one week ahead of the five-year average date. Oat condition was 53 percent good to excellent in mid August when growers were well into harvest. Hot, dry weather in August was favorable for harvest, with some lodging in fields. Sanilac county ranked first in oat production for 2001, while Tuscola, Lapeer, Shiawassee, and Montcalm round out the top five counties.

**Oats: Acres, yield, production, and value, 1997-2001**

| Year | Planted | Harvested | Yield | Production | Price [1] | Value of production |
|---|---|---|---|---|---|---|
| | *1,000 acres* | *1,000 acres* | *Bushels* | *1,000 bushels* | *Dollars* | *1,000 dollars* |
| 1997 | 95 | 80 | 61 | 4,880 | 1.86 | 9,077 |
| 1998 | 110 | 100 | 48 | 4,800 | 1.42 | 6,816 |
| 1999 | 100 | 75 | 65 | 4,875 | 1.35 | 6,581 |
| 2000 | 95 | 75 | 64 | 4,800 | 1.30 | 6,200 |
| 2001 | 70 | 55 | 64 | 3,520 | 1.55 | 5,500 |

[1] Marketing year average.

# Potatoes

Michigan's 2001 potato production was 13.95 million hundredweight (cwt) down 7 percent from a year ago. Planted acres were 46,000 and harvested acres were 45,000. The state's average yield was 310 cwt per acre, down from the record tying 315 cwt per acre in 2000. The spring of 2001 was wet and planting was delayed in many areas. Drought-like conditions followed and then continued throughout the summer, causing most non-irrigated fields to suffer moisture stress.

Michigan ranked ninth among states in potato production in 2001. Most Michigan potatoes are whites, which compromise approximately 80 percent of planted acreage, followed by russets and reds which comprise approximately 16 and 4 percent of planted acreage, respectively. Whites are sold for table use or processed for potato chips while russets are used for french fries and other frozen products.

**Fall potatoes: Acres, yield, production, and value, 1997-2001**

| Year | Planted | Harvested | Yield | Production | Price [1] | Value of production |
|---|---|---|---|---|---|---|
| | *1,000 acres* | *1,000 acres* | *Cwt* | *1,000 cwt* | *Dollars* | *1,000 dollars* |
| 1997 | 48.0 | 47.5 | 300 | 14,250 | 6.45 | 91,913 |
| 1998 | 47.0 | 46.5 | 315 | 14,648 | 6.70 | 98,142 |
| 1999 | 48.0 | 47.5 | 315 | 14,963 | 6.80 | 101,748 |
| 2000 | 49.0 | 47.5 | 315 | 14,963 | 6.70 | 100,300 |
| 2001 | 46.0 | 45.0 | 310 | 13,950 | 7.65 | 106,718 |

[1] Marketing year average.

**Fall potatoes: Stocks by type as percent of total stocks, December 1, 1997-2001**

| Type | 1997 | 1998 | 1999 | 2000 | 2001 |
|---|---|---|---|---|---|
| | *Percent* | *Percent* | *Percent* | *Percent* | *Percent* |
| White | 72 | 81 | 87 | 86 | 90 |
| Russet | 27 | 18 | 11 | 12 | 8 |
| Red | 1 | 1 | 2 | 2 | 2 |

**Fall potatoes: Production and disposition, 1997-2001**

| Crop year | Production | Total used for seed | Farm Disposition | | Sold |
|---|---|---|---|---|---|
| | | | Seed, feed, and home use | Shrinkage and loss | |
| | *1,000 cwt* | *1,000 cwt* | *1,000 cwt* | *1,000 cwt* | *1,000 cwt* |
| 1997 | 14,250 | 864 | 200 | 1,300 | 12,750 |
| 1998 | 14,648 | 888 | 200 | 1,348 | 13,100 |
| 1999 | 14,963 | 1,005 | 213 | 1,300 | 13,450 |
| 2000 | 14,963 | 1,135 | 250 | 1,700 | 13,013 |
| 2001 | 13,950 | ([1]) | ([1]) | ([1]) | ([1]) |

[1] Published in September 2002.

**Fall potatoes: Stocks, 1997-2001**

| Crop year | December 1 | January 1 | February 1 | March 1 | April 1 | May 1 |
|---|---|---|---|---|---|---|
| | *1,000 cwt* | *1,000 cwt* | *1,000 cwt* | *1,000 cwt* | *1,000 cwt* | *1,000 cwt* |
| 1997 | 8,500 | 7,000 | 5,500 | 3,800 | 2,300 | 1,000 |
| 1998 | 9,100 | 7,500 | 5,400 | 4,100 | 2,200 | 800 |
| 1999 | 8,800 | 7,100 | 5,800 | 4,200 | 2,700 | 1,300 |
| 2000 | 8,700 | 6,900 | 5,200 | 3,400 | 1,500 | 700 |
| 2001 | 8,200 | 6,200 | 4,800 | 3,200 | 1,500 | 400 |

# Soybeans

Michigan soybean production totaled 63.9 million bushels, down 13 percent from 2000. The yield was 30 bushels per acre in 2001. Planted and harvested acres were up from the 2000 total to 2.15 million and 2.13 million, respectively. By June 1, farmers had 77 percent of the soybean acres planted. Planting conditions were excellent for soybeans. Drought conditions during the growing season stressed the crop. Soybean aphids, cyst nematodes, and spider mites were present in fields. Wet conditions slowed harvest of Michigan's soybean crop. Ninety-five percent of soybeans were harvested by November 19, just 2 percent behind the normal pace. Lenawee, Sanilac, Branch, Gratiot, and Shiawassee were the top counties in soybean production.

**Soybeans: Acres, yield, production, and value, 1997-2001**

| Year | Planted | Harvested | Yield | Production | Price [1] | Value of production |
|---|---|---|---|---|---|---|
| | *1,000 acres* | *1,000 acres* | *Bushels* | *1,000 bushels* | *Dollars* | *1,000 dollars* |
| 1997 | 1,870 | 1,860 | 38.5 | 71,610 | 6.47 | 463,317 |
| 1998 | 1,900 | 1,890 | 39.0 | 73,710 | 4.99 | 367,813 |
| 1999 | 1,950 | 1,940 | 40.0 | 77,600 | 4.61 | 357,736 |
| 2000 | 2,050 | 2,030 | 36.0 | 73,080 | 4.54 | 331,800 |
| 2001 | 2,150 | 2,130 | 30.0 | 63,900 | 4.20 | 268,400 |

[1] Marketing year average.

**Soybeans: Stocks by quarter, 1997-2001**

| Crop year | December 1 | | March 1 | | June 1 | | September 1 | |
|---|---|---|---|---|---|---|---|---|
| | On farm | Off farm | On farm | Off farm | On farm | Off farm | On farm | Off farm |
| | *1,000 bushels* | *1,000 bushels* | *1,000 bushels* | *1,000 bushels* | *1,000 bushels* | *1,000 bushels* | *1,000 bushels* | *1,000 bushels* |
| 1997 | 19,000 | 20,931 | 12,000 | 10,646 | 4,000 | 4,677 | 1,500 | 1,262 |
| 1998 | 30,000 | 18,000 | 22,000 | 9,950 | 11,000 | 5,600 | 4,000 | 2,150 |
| 1999 | 33,000 | 20,200 | 17,000 | 12,750 | 6,000 | 6,250 | 4,100 | 1,500 |
| 2000 | 30,000 | 19,800 | 18,000 | 9,600 | 8,500 | 3,225 | 2,400 | 1,400 |
| 2001 | 30,000 | 20,500 | 18,000 | 11,750 | 7,700 | 5,050 | | |

**Soybeans: Percentage of acreage planted, 1997-2001**

| Year | Month and day | | | | | | |
|---|---|---|---|---|---|---|---|
| | May | | | June | | | July |
| | 10 | 20 | 30 | 10 | 20 | 30 | 10 |
| 1997 | 5 | 19 | 60 | 84 | 100 | 100 | 100 |
| 1998 | 10 | 56 | 81 | 92 | 98 | 100 | 100 |
| 1999 | 12 | 49 | 81 | 93 | 99 | 100 | 100 |
| 2000 | 12 | 29 | 42 | 63 | 82 | 94 | 100 |
| 2001 | 31 | 58 | 75 | 80 | 91 | 96 | 100 |
| 5-year-average | 14.0 | 42.2 | 67.8 | 82.4 | 94.0 | 98.0 | 100.0 |

**Soybeans: Percentage of acreage setting pods, 1997-2001**

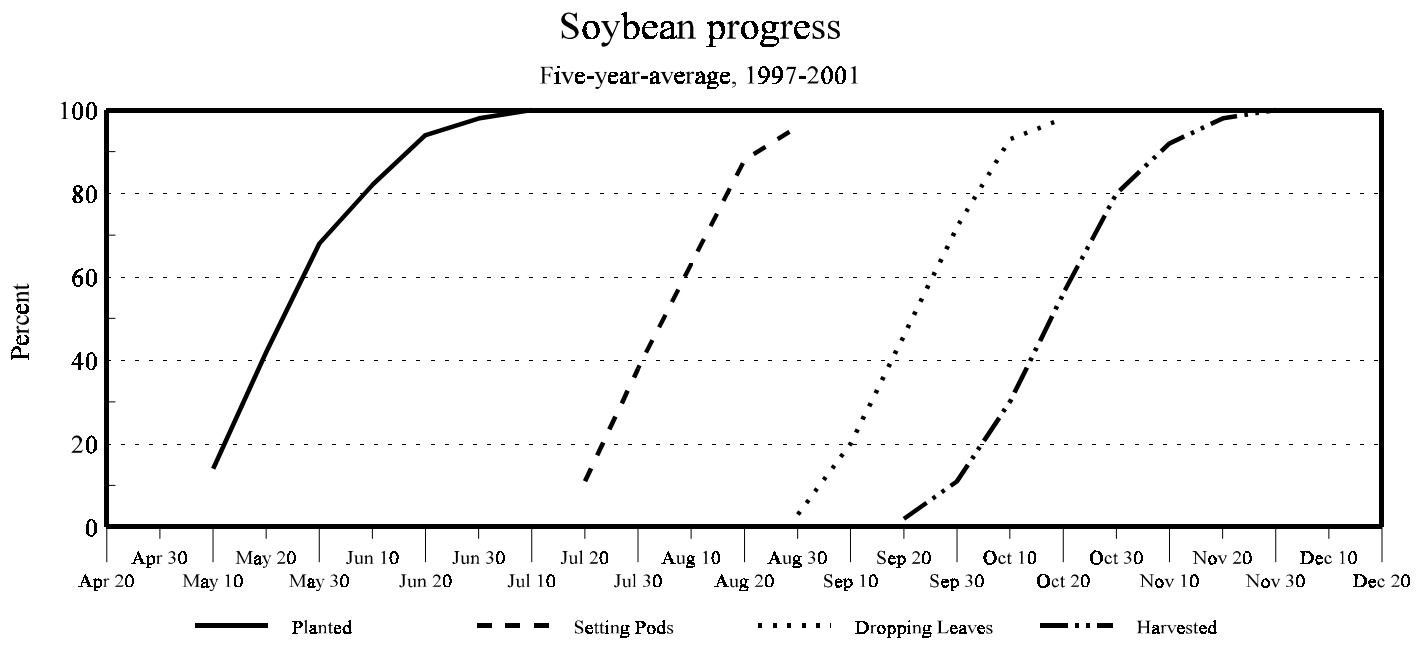
| Year | Month and day | | | | | |
|---|---|---|---|---|---|---|
| | July | | | August | | |
| | 10 | 20 | 30 | 10 | 20 | 30 |
| 1997 | 0 | 0 | 20 | 53 | 93 | 100 |
| 1998 | 0 | 17 | 57 | 73 | 96 | 100 |
| 1999 | 0 | 20 | 48 | 77 | 93 | 100 |
| 2000 | 0 | 4 | 20 | 42 | 74 | 86 |
| 2001 | 0 | 15 | 46 | 70 | 84 | 94 |
| 5-year-average | 0.0 | 11.2 | 38.2 | 63.0 | 88.0 | 96.0 |

**Soybeans: Percentage of acreage shedding leaves, 1997-2001**

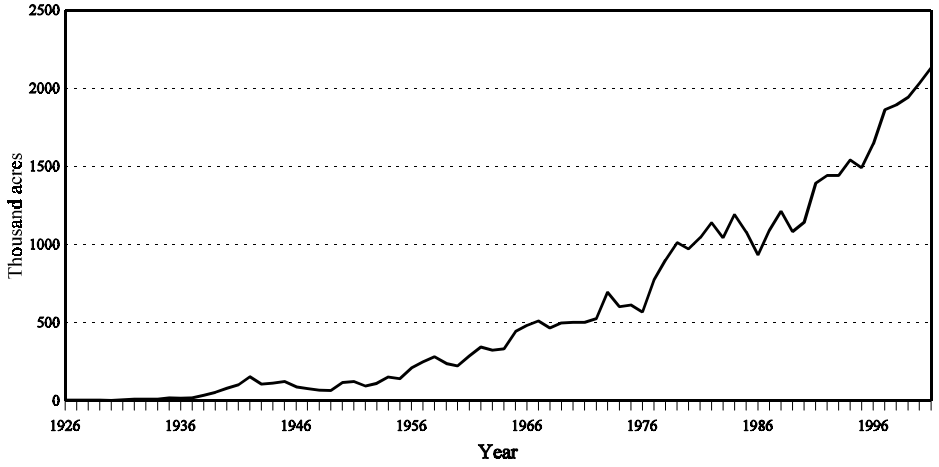
| Year | Month and day | | | | | | |
|---|---|---|---|---|---|---|---|
| | August | | September | | | October | |
| | 20 | 30 | 10 | 20 | 30 | 10 | 20 |
| 1997 | 0 | 0 | 7 | 24 | 57 | 98 | 100 |
| 1998 | 0 | 9 | 40 | 68 | 87 | 100 | 100 |
| 1999 | 0 | 2 | 31 | 66 | 98 | 100 | 100 |
| 2000 | 0 | 0 | 3 | 26 | 54 | 78 | 93 |
| 2001 | 0 | 4 | 18 | 47 | 64 | 87 | 99 |
| 5-year-average | 0.0 | 3.0 | 19.8 | 46.2 | 72.0 | 92.6 | 98.4 |

**Soybeans: Percentage of acreage harvested, 1997-2001**

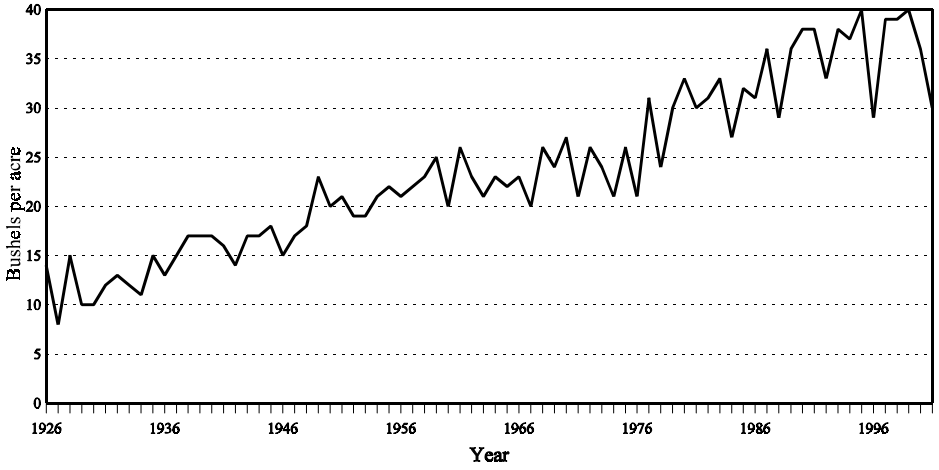
| Year | Month and day | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | September | | | October | | | November | | |
| | 10 | 20 | 30 | 10 | 20 | 30 | 10 | 20 | 30 |
| 1997 | 0 | 0 | 4 | 25 | 64 | 81 | 90 | 95 | 98 |
| 1998 | 0 | 3 | 22 | 44 | 66 | 93 | 99 | 100 | 100 |
| 1999 | 0 | 5 | 22 | 46 | 67 | 92 | 98 | 100 | 100 |
| 2000 | 0 | 0 | 3 | 15 | 48 | 76 | 92 | 100 | 100 |
| 2001 | 0 | 1 | 6 | 18 | 36 | 57 | 79 | 96 | 100 |
| 5-year-average | 0.0 | 1.8 | 11.4 | 29.6 | 56.2 | 79.8 | 91.6 | 98.2 | 99.6 |



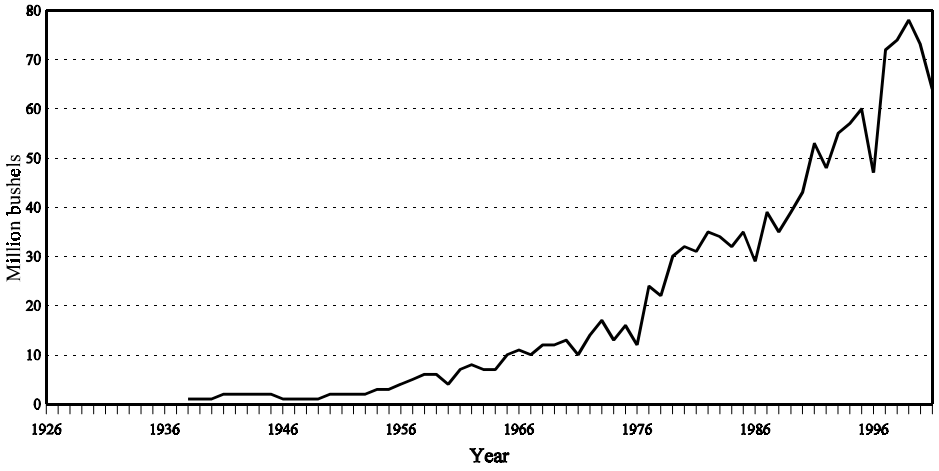
## Soybean harvested acres, 1926-2001




## Soybean yield, 1926-2001




## Soybean production, 1926-2001



# Sugarbeets

Acres planted to sugarbeets dropped for the second year in a row in Michigan and decreased 5 percent in 2001 to 180,000 acres planted. Harvested acreage, at 166,000, remained the same as the previous year. Acres idled were attributed primarily to the PIK program. All of the crop was planted by the middle of May. Growing conditions for sugarbeets saw variable weather. Early season rain and cooler weather caused substantial insect feeding from spinach leafminers. Drought conditions later in the growing season held sugarbeet growth at a standstill and some fields had damage from Cercospora Leafspots. Heavy rainfall in late August and September benefitted the crop. Sugarbeet harvest was completed ahead of last year, but muddy conditions slowed harvest some. Yields averaged 19.4 tons per acre compared with 20.5 tons per acre in 2000. The total tonnage decreased 5 percent from 2000. Huron and Tuscola were the top sugarbeet producing counties for 2001.

**Sugarbeets: Acres, yield, production, and value, 1997-2001**

| Year | Planted | Harvested | Yield | Production | Price [1] | Value of production |
|---|---|---|---|---|---|---|
| | *1,000 acres* | *1,000 acres* | *Tons* | *1,000 tons* | *Dollars* | *1,000 dollars* |
| 1997 | 163 | 160 | 19.0 | 3,040 | 38.50 | 117,040 |
| 1998 | 177 | 173 | 16.0 | 2,768 | 36.70 | 101,586 |
| 1999 | 194 | 190 | 18.6 | 3,534 | 32.80 | 115,915 |
| 2000 | 189 | 166 | 20.5 | 3,403 | 31.30 | 106,500 |
| 2001 | 180 | 166 | 19.4 | 3,220 | ( [2] ) | ( [2] ) |

[1] Marketing year average.
[2] Published in February 2003.

# Wheat

Michigan's 2001 winter wheat crop totaled 35.8 million bushels, virtually unchanged from 2000. Planted acres were up 40,000 from the previous year to 570,000. Harvested acreage rose 60,000 from 2000 to 560,000. The average yield was 64 bushels per acre. The value of the crop rose 16 percent to $88 million. Sanilac, Huron, Lenawee, Saginaw, and Monroe were the top five counties in wheat production.

Planting began on schedule the second week of September. Wet weather put seeding behind schedule the second half of that month. Drier conditions prevailed in October, and planting was done by Halloween, the normal time. Emergence was slowed in October by cool temperatures, but the crop was out of the ground by December 1, on schedule. Over two-thirds of acres were rated good to excellent by the end of November. Temperatures were below normal in December. The crop, however, was sheltered by a record high snowfall for the month. There was little snow cover for winter wheat in Michigan the second half of winter. There was, however, very little extremely cold weather after December.

Adequate soil moisture and warm late April temperatures gave the Michigan winter wheat crop a quick start in the spring. May was exceedingly wet. Despite below normal temperatures late spring, the crop headed out ahead of schedule. Michigan wheat growers had excellent weather for combining, which began in earnest July 10. Early yields were good. Yields on field harvested later in July were excellent. Over 95 percent of crop was out of the fields by August 1.

**Winter wheat: Acres, yield, production, and value, 1997-2001**

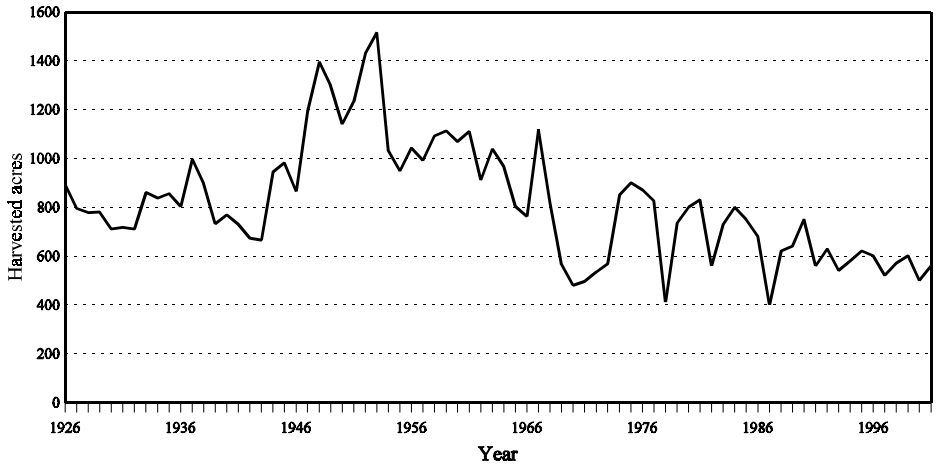
| Year | Planted | Harvested | Yield | Production | Price [1] | Value of production |
|---|---|---|---|---|---|---|
| | *1,000 acres* | *1,000 acres* | *Bushels* | *1,000 bushels* | *Dollars* | *1,000 dollars* |
| 1997 | 530 | 520 | 62 | 32,240 | 3.26 | 105,102 |
| 1998 | 600 | 570 | 54 | 30,780 | 2.33 | 71,717 |
| 1999 | 610 | 600 | 69 | 41,400 | 2.12 | 87,768 |
| 2000 | 530 | 500 | 72 | 36,000 | 2.11 | 76,000 |
| 2001 | 570 | 560 | 64 | 35,840 | 2.45 | 87,800 |

[1] Marketing year average.

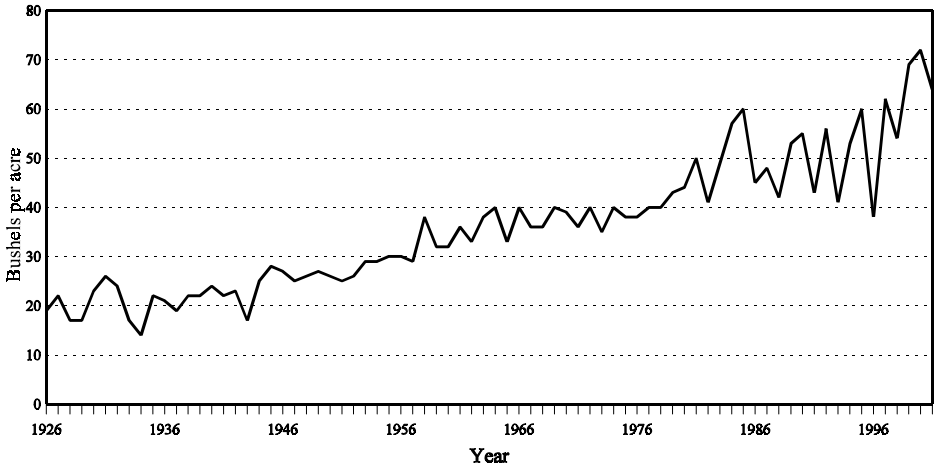
**Wheat: Stocks by quarter, 1997-2001**

| Crop year | September 1 | | December 1 | | March 1 | | June 1 | |
|---|---|---|---|---|---|---|---|---|
| | On farm | Off farm | On farm | Off farm | On farm | Off farm | On farm | Off farm |
| | *1,000 bushels* | *1,000 bushels* | *1,000 bushels* | *1,000 bushels* | *1,000 bushels* | *1,000 bushels* | *1,000 bushels* | *1,000 bushels* |
| 1997 | 2,700 | 18,750 | 1,900 | 16,005 | 1,200 | 11,035 | 500 | 6,223 |
| 1998 | 6,500 | 25,200 | 4,500 | 21,000 | 3,000 | 17,500 | 1,100 | 12,000 |
| 1999 | 5,000 | 31,050 | 3,000 | 25,050 | 2,800 | 19,450 | 1,900 | 12,900 |
| 2000 | 7,000 | 28,950 | 4,100 | 22,400 | 3,000 | 17,150 | 800 | 12,380 |
| 2001 | 4,500 | 25,550 | 3,300 | 20,050 | 1,200 | 16,050 | 600 | 10,550 |

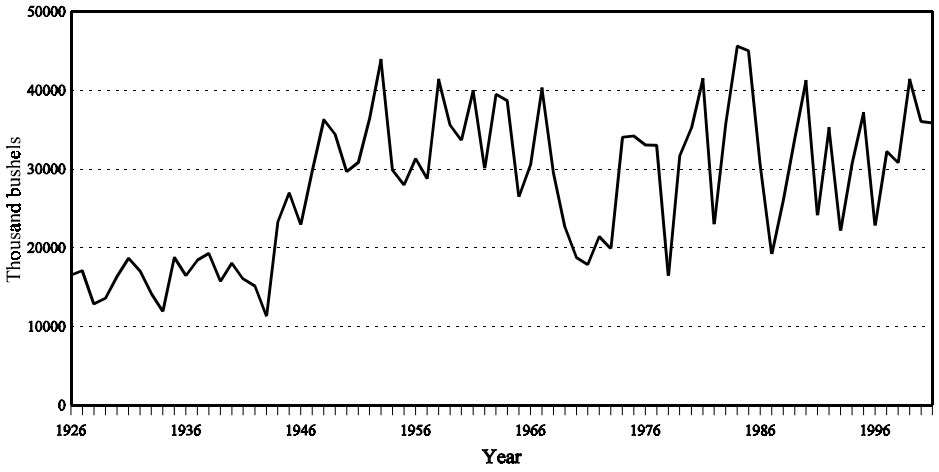
## Wheat harvested acres, 1926-2001




## Wheat yield, 1926-2001




## Wheat production, 1926-2001



# Fruit

The 2001 growing season started out with seasonal conditions that allowed fruit maturity to progress at a normal pace through May and into June. A frost event on May 12 and 13 seriously damaged the juice grapes in the southwest. Blueberries and cherries also incurred some damage. However, prospects were good to excellent for most fruit crops going into the summer months. Temperature patterns shifted in June bringing warm and dry conditions that continued through most of the summer. Apple yields were good but lower than originally anticipated. The dry summer hampered sizing, and late season fruit drop in some areas was higher than normal. Harvest was virtually completed by the end of October. In tart and sweet cherries, the favorable weather during April caused a short bloom that led to a good set on all trees and a heavy set on some. There was no adverse weather during the growing season except for isolated hail and minor frost damage in the southwest and northwest. Fruit size was smaller than normal due to the warm, dry June weather. The tart cherry crop was the largest since 1995 and the second largest on record. Sweet cherry production was up 17 percent from the previous year. Peach growers reported excellent quality, but dry conditions in July and August reduced fruit size. Most of the blueberry acreage benefitted from the good spring and early summer weather as yields were the largest since 1993. Non-irrigated fields did suffer sizing problems due to the July and August drought. Van Buren and Allegan counties also had high Japanese beetle pressure. Pear yields were fair with poor size due to the dry July and August. This caused some growers to spot pick and leave pears in the orchards. Yield and quality of plums were also fair. The dry July and August caused some drop and size problems.

Apple production was 880 million pounds, up 80 million pounds from 2000. The farm level value of the crop was $81.6 million, up 10.2 percent from 2000. Michigan ranked third in U.S. apple production behind Washington and New York. Washington produced 5.1 billion pounds and New York produced 1.0 billion pounds in 2001.

Tart cherry production was 297 million pounds, 80 percent of the U.S. total. The yield per bearing acre was 10,800 pounds, up from 7,020 in 2000. The preliminary farm level value was $37.9 million. Sweet cherry production was 23,000 tons, up from 19,600 tons in 2000. The average yield per bearing acre was 3.11 tons. The preliminary farm level value was $11.1 million.

Cultivated blueberry production in Michigan was 77 million pounds, about 38 percent of the U.S. total. Growers harvested 17,400 acres in 2001. The farm level value was $51.3 million. Seventy-one percent of Michigan blueberries were processed. New Jersey growers produced 38 million pounds. Strawberry production in Michigan was 5.8 million pounds on 1,000 harvested acres. The preliminary farm level value of the crop was $5.5 million, down 11 percent from 2000.

Michigan peach production fell to 42 million pounds, down 5.5 million pounds from 2000. Total bearing acres were 4,500, and the preliminary farm level value was $12.5 million. Pear production in Michigan was 4,600 tons from 800 acres. The preliminary farm level value was $1.2 million. Michigan plum production was 3,600 tons on 900 bearing acres. The preliminary farm level value was $1.3 million.

Michigan grape production in 2001 fell to 28,900 tons, down 67 percent from 2000. The preliminary farm level value was $8.9 million. There were 19,000 tons of Concords and 7,000 tons of Niagaras processed. Grapes processed for wine fell to 2,200 tons, down 29 percent from 2000.

**Fruit: Record highs and lows**

| Crop | Unit | Record high | | Record low | | Year estimates started |
|---|---|---|---|---|---|---|
| | | Quantity | Year | Quantity | Year | |
| Apples | Million pounds | 1,200 | 1999 | 53 | 1945 | 1889 |
| Blueberries | Million pounds | 87 | 1993 | 34 | 1992 | 1992 |
| Cherries, sweet | Tons | 37,500 | 1978 | 500 | 1945 | 1925 |
| Cherries, tart | Million pounds | 380 | 1964 | 18 | 1927 | 1925 |
| Grapes | Tons | 87,200 | 2000 | 4,200 | 1889 | 1889 |
| Peaches | Million pounds | 255 | 1945,1946 | 7.4 | 1918 | 1889 |
| Pears | Tons | 48,600 | 1964 | 2,500 | 1990 | 1889 |
| Prunes and plums | Tons | 25,000 | 1971 | 1,700 | 1945 | 1919 |
| Strawberries | 1,000 cwt | 451 | 1940 | 58 | 2001 | 1928 |

**Fruit: Acres harvested and value of production, 1997-2001**

| Item | Unit | 1997 | 1998 | 1999 | 2000 | 2001 |
|---|---|---|---|---|---|---|
| Acres harvested | 1,000 acres | 127 | 127 | 124 | 122 | 116 |
| Value of production | 1,000 dollars | 244,732 | 205,010 | 249,763 | 218,999 | 217,789 |

## Fruit: Acres, production, and value, 1997-2001

| Fruit and Year | Bearing acres | Yield | Production | | Price | Value of production |
|---|---|---|---|---|---|---|
| | | | Total | Utilized | | |
| | *Acres* | *Pounds* | *Million pounds* | *Million pounds* | *Dollars per pound* | *1,000 dollars* |
| Apples | | | | | | |
| 1997 | 54,000 | 18,500 | 1,000 | 1,000 | 0.098 | 98,200 |
| 1998 | 54,000 | 18,500 | 1,000 | 960 | 0.087 | 83,200 |
| 1999 | 52,000 | 23,100 | 1,200 | 1,180 | 0.088 | 103,465 |
| 2000 | 48,500 | 16,500 | 800 | 795 | 0.093 | 74,065 |
| 2001 | 44,000 | 20,000 | 880 | 850 | 0.096 | 81,610 |
| Blueberries [1] | | | | | | |
| 1997 | 16,500 | 4,360 | 72 | 72 | 0.695 | 50,042 |
| 1998 | 16,400 | 2,990 | 49 | 49 | 0.618 | 30,260 |
| 1999 | 16,600 | 4,220 | 70 | 70 | 0.781 | 54,660 |
| 2000 | 16,700 | 3,710 | 62 | 62 | 0.889 | 55,140 |
| 2001 | 17,400 | 4,430 | 77 | 77 | 0.666 | 51,315 |
| Cherries, tart | | | | | | |
| 1997 | 28,400 | 7,920 | 225 | 221 | 0.156 | 34,380 |
| 1998 | 28,400 | 9,260 | 263 | 229 | 0.140 | 32,162 |
| 1999 | 28,100 | 6,580 | 185 | 185 | 0.228 | 42,134 |
| 2000 | 28,500 | 7,020 | 200 | 200 | 0.182 | 36,370 |
| 2001 | 27,400 | 10,800 | 297 | 242 | 0.184 | 44,412 |
| Peaches | | | | | | |
| 1997 | 5,000 | 11,000 | 55.0 | 55.0 | 0.263 | 14,450 |
| 1998 | 5,000 | 8,600 | 43.0 | 42.5 | 0.272 | 11,546 |
| 1999 | 4,600 | 5,000 | 23.0 | 23.0 | 0.237 | 5,440 |
| 2000 | 4,800 | 9,900 | 47.5 | 45.5 | 0.249 | 11,340 |
| 2001 | 4,500 | 9,330 | 42.0 | 42.0 | 0.298 | 12,503 |
| | *Acres* | *Tons* | *Tons* | *Tons* | *Dollars per ton* | *1,000 dollars* |
| Cherries, sweet | | | | | | |
| 1997 | 7,800 | 3.46 | 27,000 | 27,000 | 740 | 19,986 |
| 1998 | 7,900 | 4.43 | 35,000 | 33,000 | 562 | 18,551 |
| 1999 | 7,700 | 3.51 | 27,000 | 26,500 | 534 | 14,149 |
| 2000 | 7,600 | 2.58 | 19,600 | 19,600 | 486 | 9,520 |
| 2001 | 7,400 | 3.11 | 23,000 | 23,000 | 482 | 11,092 |
| Grapes | | | | | | |
| 1997 | 12,300 | 4.96 | 61,000 | 61,000 | 293 | 17,873 |
| 1998 | 12,300 | 5.72 | 70,400 | 70,400 | 282 | 19,820 |
| 1999 | 11,700 | 6.40 | 74,900 | 74,900 | 281 | 21,083 |
| 2000 | 12,500 | 6.98 | 87,200 | 87,200 | 277 | 24,156 |
| 2001 | 12,300 | 2.35 | 28,900 | 28,500 | 313 | 8,926 |
| Pears | | | | | | |
| 1997 | 900 | 4.44 | 4,000 | 4,000 | 250 | 1,000 |
| 1998 | 900 | 5.60 | 5,040 | 4,800 | 271 | 1,302 |
| 1999 | 850 | 5.88 | 5,000 | 4,900 | 265 | 1,300 |
| 2000 | 800 | 6.50 | 5,200 | 5,200 | 270 | 1,402 |
| 2001 | 800 | 5.75 | 4,600 | 3,900 | 297 | 1,160 |
| Plums | | | | | | |
| 1997 | 1,150 | 3.48 | 4,000 | 4,000 | 348 | 1,390 |
| 1998 | 1,100 | 3.27 | 3,600 | 3,600 | 300 | 1,080 |
| 1999 | 900 | 4.44 | 4,000 | 3,750 | 299 | 1,120 |
| 2000 | 800 | 4.50 | 3,600 | 3,300 | 261 | 861 |
| 2001 | 900 | 4.00 | 3,600 | 3,600 | 358 | 1,289 |

[1] Harvested acres.

## Apples: Stocks in cold and controlled atmosphere storage [1]

| Month | Crop year | | | | |
|---|---|---|---|---|---|
| | 1997 | 1998 | 1999 | 2000 | 2001 |
| | *1,000 pounds* | *1,000 pounds* | *1,000 pounds* | *1,000 pounds* | *1,000 pounds* |
| October | 444,738 | | 525,756 | 416,923 | 484,244 |
| November | 459,102 | 405,993 | 534,061 | 343,731 | 392,432 |
| December | 365,106 | 347,729 | 382,346 | 294,088 | 343,380 |
| January | 289,519 | 241,038 | 357,336 | 238,013 | 261,696 |
| February | 201,020 | 177,725 | 264,771 | 215,482 | 199,318 |
| March | 118,194 | 101,682 | 193,012 | 160,481 | 178,996 |
| April | 72,368 | 58,357 | 127,684 | 104,512 | 78,303 |

[1] End-of-month stocks.

## Apples: Utilization and price, 1997-2001

| Year | Fresh market | | Processing | | Total | |
|---|---|---|---|---|---|---|
| | Quantity | Price per lb | Quantity | Price per lb | Quantity | Price per lb |
| | *Million pounds* | *Dollars* | *Million pounds* | *Dollars* | *Million pounds* | *Dollars* |
| 1997 | 300 | 0.150 | 700 | 0.076 | 1,000 | 0.098 |
| 1998 | 320 | 0.140 | 640 | 0.060 | 960 | 0.087 |
| 1999 | 370 | 0.145 | 810 | 0.062 | 1,180 | 0.088 |
| 2000 | 260 | 0.147 | 535 | 0.067 | 795 | 0.093 |
| 2001 | 270 | 0.168 | 580 | 0.063 | 850 | 0.096 |

## Apples, processing: Utilization and price, 1997-2001

| Year | Canned | | Frozen | | Juice and cider | | Other | |
|---|---|---|---|---|---|---|---|---|
| | Quantity | Price per lb | Quantity | Price per lb | Quantity | Price per lb | Quantity | Price per lb |
| | *Million pounds* | *Dollars* | *Million pounds* | *Dollars* | *Million pounds* | *Dollars* | *Million pounds* | *Dollars* |
| 1997 | 265 | 0.090 | 160 | 0.096 | 270 | 0.052 | 5 | 0.060 |
| 1998 | 230 | 0.073 | 100 | 0.086 | 300 | 0.041 | 10 | 0.050 |
| 1999 | 255 | 0.072 | 160 | 0.082 | 380 | 0.045 | 15 | 0.060 |
| 2000 | 190 | 0.078 | 120 | 0.085 | 215 | 0.048 | 10 | 0.083 |
| 2001 | 225 | 0.070 | 120 | 0.085 | 220 | 0.043 | 15 | 0.065 |

## Blueberries: Utilization and price, 1997-2001

| Year | Production | | Fresh market | | Processed | |
|---|---|---|---|---|---|---|
| | Total | Utilized | Quantity | Price per pound | Quantity | Price per pound |
| | *Million lbs* | *Million lbs* | *Million lbs* | *Dollars* | *Million lbs* | *Dollars* |
| 1997 | 72 | 72 | 19 | 0.988 | 53 | 0.590 |
| 1998 | 49 | 49 | 16 | 0.860 | 33 | 0.500 |
| 1999 | 70 | 70 | 18 | 1.130 | 52 | 0.660 |
| 2000 | 62 | 62 | 19 | 1.250 | 43 | 0.730 |
| 2001 | 77 | 77 | 22 | 0.970 | 55 | 0.545 |

## Cherries, sweet: Production and utilization, 1997-2001

| Year | Total production | Utilized production | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Fresh | | Canned | | Brined | | Other [1] | |
| | | Quantity | Price per ton | Quantity | Price per ton | Quantity | Price per ton | Quantity | Price per ton |
| | *Tons* | *Tons* | *Dollars* | *Tons* | *Dollars* | *Tons* | *Dollars* | *Tons* | *Dollars* |
| 1997 | 27,000 | 500 | 1,600 | 800 | 1,000 | 21,500 | 650 | 4,200 | 1,050 |
| 1998 | 35,000 | 700 | 1,400 | 4,700 | 580 | 24,500 | 530 | 3,100 | 598 |
| 1999 | 27,000 | 950 | 1,500 | 3,900 | 540 | 19,300 | 470 | 2,350 | 650 |
| 2000 | 19,600 | 600 | 1,680 | 3,000 | 500 | 14,650 | 430 | 1,350 | 530 |
| 2001 | 23,000 | 1,000 | 1,280 | 700 | 450 | 15,500 | 440 | 5,800 | 460 |

[1] Frozen, juice, etc.

## Cherries, tart: Utilization, 1997-2001

| Year | Production | | Fresh market | Processed | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Total | Utilized | | Canned | | Frozen | | Other [1] | |
| | | | | Quantity | Price per pound | Quantity | Price per pound | Quantity | Price per pound |
| | *Million lbs* | *Million lbs* | *Million lbs* | *Million lbs* | *Dollars* | *Million lbs* | *Dollars* | *Million lbs* | *Dollars* |
| 1997 | 225 | 221 | 1 | 70 | 0.164 | 145 | 0.153 | 5 | 0.042 |
| 1998 | 263 | 229 | 1 | 65 | 0.147 | 150 | 0.139 | 13 | 0.064 |
| 1999 | 185 | 185 | 1 | 69 | 0.239 | 100 | 0.230 | 15 | 0.144 |
| 2000 | 200 | 200 | 1 | 80 | 0.187 | 110 | 0.181 | 9 | 0.106 |
| 2001 | 297 | 242 | 1 | 80 | 0.179 | 151 | 0.189 | 10 | 0.098 |

[1] Juice, wine, brined, and dried.

## Cherries, tart: Production by region, 1997-2001

| Region | 1997 | 1998 | 1999 | 2000 | 2001 |
|---|---|---|---|---|---|
| | *Million pounds* | *Million pounds* | *Million pounds* | *Million pounds* | *Million pounds* |
| Northwest | 140 | 186 | 108 | 109 | 183 |
| West Central | 70 | 59 | 48 | 71 | 84 |
| Southwest and other | 15 | 18 | 29 | 20 | 30 |
| Michigan | 225 | 263 | 185 | 200 | 297 |

## Cherries, tart, frozen: Stocks in cold storage, 1998-2001, crop years

| Month | East North Central region [1] | | | | 48 States total [2] | | | |
|---|---|---|---|---|---|---|---|---|
| | 1998 | 1999 | 2000 | 2001 | 1998 | 1999 | 2000 | 2001 |
| | *1,000 pounds* | *1,000 pounds* | *1,000 pounds* | *1,000 pounds* | *1,000 pounds* | *1,000 pounds* | *1,000 pounds* | *1,000 pounds* |
| July | 144,388 | 141,216 | 135,748 | 135,786 | 169,624 | 162,135 | 166,000 | 158,160 |
| August | 139,644 | 131,875 | 133,294 | 151,858 | 165,591 | 156,754 | 160,497 | 174,165 |
| September | 133,436 | 126,300 | 115,570 | 137,019 | 157,631 | 149,070 | 141,514 | 155,033 |
| October | 121,605 | 114,435 | 110,116 | 124,835 | 143,413 | 136,220 | 133,210 | 144,013 |
| November | 112,595 | 105,799 | 101,551 | 111,568 | 133,236 | 125,343 | 122,339 | 129,620 |
| December | 100,308 | 98,574 | 95,628 | 109,652 | 122,205 | 116,364 | 115,042 | 127,215 |
| January | 89,465 | 88,934 | 90,638 | 101,979 | 108,846 | 105,384 | 107,783 | 117,143 |
| February | 82,191 | 82,887 | 83,994 | 101,197 | 100,498 | 97,224 | 98,810 | 115,834 |
| March | 73,785 | 72,641 | 75,583 | 94,168 | 90,498 | 84,957 | 88,595 | 106,150 |
| April | 65,852 | 67,478 | 68,465 | 85,579 | 79,947 | 78,475 | 78,721 | 96,170 |
| May | 58,847 | 57,753 | 58,553 | 78,357 | 70,786 | 66,628 | 66,095 | 86,138 |
| June | 49,763 | 53,578 | 50,822 | 68,655 | 58,361 | 61,412 | 56,927 | 75,159 |

[1] Illinois, Indiana, Michigan, Ohio, and Wisconsin.
[2] Excluding Alaska and Hawaii.

## Grapes: Utilization, 1997-2001

| Year | Fresh Market | | Processing | | | | Utilized production |
|---|---|---|---|---|---|---|---|
| | | | Juice | | Wine | | |
| | Quantity | Price per ton | Quantity | Price per ton | Quantity | Price per ton | |
| | *Tons* | *Dollars* | *Tons* | *Dollars* | *Tons* | *Dollars* | *Tons* |
| 1997 | 200 | 900 | 58,200 | 268 | 2,600 | 800 | 61,000 |
| 1998 | 400 | 900 | 67,500 | 260 | 2,500 | 775 | 70,400 |
| 1999 | 500 | 800 | 71,500 | 260 | 2,900 | 700 | 74,900 |
| 2000 | 500 | 800 | 83,600 | 258 | 3,100 | 825 | 87,200 |
| 2001 | 300 | 800 | 26,000 | 255 | 2,200 | 940 | 28,500 |

## Grapes: Processed by variety, 1997-2001

| Year | Concord | Niagara | Other |
|---|---|---|---|
| | *Tons* | *Tons* | *Tons* |
| 1997 | 45,200 | 13,400 | 2,600 |
| 1998 | 53,800 | 13,700 | 2,500 |
| 1999 | 57,300 | 14,400 | 2,900 |
| 2000 | 64,500 | 19,100 | 3,100 |
| 2001 | 19,000 | 7,000 | 2,200 |

**Peaches: Utilization and value, 1998-2001**

| Year | Fresh Market | | | Processing | | |
|---|---|---|---|---|---|---|
| | Production | Price per pound | Value of production | Production | Price per ton | Value of production |
| | *Million lbs* | *Dollars* | *1,000 dollars* | *Million lbs* | *Dollars* | *1,000 dollars* |
| 1998 | 31.5 | 0.315 | 9,923 | 11.0 | 295 | 1,623 |
| 1999 | 11.0 | 0.320 | 3,520 | 12.0 | 320 | 1,920 |
| 2000 | 29.5 | 0.280 | 8,260 | 16.0 | 385 | 3,080 |
| 2001 | 27.0 | 0.375 | 10,125 | 15.0 | 317 | 2,378 |

**Plums: Utilization and value, 1997-2001**

| Year | Fresh Market | | | Processing | | |
|---|---|---|---|---|---|---|
| | Production | Price per Ton [1] | Value of production [1] | Production | Price per ton [1] | Value of production [1] |
| | *Tons* | *Dollars* | *1,000 dollars* | *Tons* | *Dollars* | *1,000 dollars* |
| 1997 | 1,500 | | | 2,500 | | |
| 1998 | 1,200 | 390 | 468 | 2,400 | 255 | 612 |
| 1999 | 1,100 | 440 | 484 | 2,650 | 240 | 636 |
| 2000 | 1,250 | 270 | 338 | 2,050 | 255 | 523 |
| 2001 | 1,800 | 442 | 796 | 1,800 | 274 | 493 |

[1] Not available prior to 1998.

**Strawberries: Acres, production and value, 1997-2001**

| Year | Total | Harvested | Yield | Production | Price per cwt | Value of production |
|---|---|---|---|---|---|---|
| | *Acres* | *Acres* | *Cwt* | *1,000 cwt* | *Dollars* | *1,000 dollars* |
| 1997 | 1,600 | 1,500 | 65 | 98 | 75.60 | 7,411 |
| 1998 | 1,500 | 1,400 | 68 | 95 | 74.60 | 7,089 |
| 1999 | 1,400 | 1,400 | 64 | 90 | 71.20 | 6,412 |
| 2000 | 1,200 | 1,200 | 69 | 83 | 74.00 | 6,145 |
| 2001 | 1,000 | 1,000 | 58 | 58 | 94.50 | 5,482 |

**Strawberries: Utilization and value, 1997-2001**

| Year | Fresh Market | | | Processing | | |
|---|---|---|---|---|---|---|
| | Production | Price per cwt | Value of production | Production | Price per cwt | Value of production |
| | *1,000 cwt* | *Dollars* | *1,000 dollars* | *1,000 cwt* | *Dollars* | *1,000 dollars* |
| 1997 | 87 | 80.00 | 6,960 | 11 | 41.00 | 451 |
| 1998 | 82 | 79.00 | 6,478 | 13 | 47.00 | 611 |
| 1999 | 71 | 78.00 | 5,538 | 19 | 46.00 | 874 |
| 2000 | 66 | 81.00 | 5,346 | 17 | 47.00 | 799 |
| 2001 | 52 | 100.00 | 5,200 | 6 | 47.00 | 282 |

**Refrigerated warehouses: Number and capacity, October 1, 2001**

| Type | Number | Usable freezer space | Usable cooler space | Controlled atmosphere |
|---|---|---|---|---|
| | | *1,000 cu ft* | *1,000 cu ft* | *1,000 bushels* |
| Apple | 181 | | 29,742 | 7,537 |
| General-public | 25 | 47,423 | 7,783 | |
| General-private and semi-private | 22 | 12,446 | 6,240 | |

**All fruit: Number of farms and acres, by county and district**

| County and district | Total farms | Apples | Cherries, tart | Cherries, sweet | Blueberries | Grapes | Peaches | Plums |
|---|---|---|---|---|---|---|---|---|
| Benzie | 39 | 930 | 1,200 | 270 | | | | |
| Grand Traverse | 124 | 900 | 4,100 | 1,800 | | 255 | | 60 |
| Leelanau | 184 | 2,000 | 8,100 | 4,150 | | 275 | 50 | 185 |
| Manistee | 43 | 1,150 | 850 | 250 | | | 95 | |
| Other counties | 17 | 60 | 170 | | | | | |
| **Northwest** [3] | 451 | 5,700 | 16,500 | 7,300 | 25 | 550 | 210 | 280 |
| Ionia | 20 | 950 | | | | | | |
| Kent | 115 | 10,300 | 280 | | | | 85 | |
| Mason | 36 | 1,650 | 1,800 | 530 | | | 330 | 80 |
| Montcalm, Mecosta | 22 | 950 | | | | | | |
| Muskegon | 44 | 2,300 | 170 | | 920 | | 95 | |
| Newaygo | 20 | 1,700 | 210 | | | | 85 | |
| Oceana | 111 | 3,550 | 7,750 | 480 | | | 1,800 | 155 |
| Ottawa | 161 | 4,000 | | | 5,400 | | 110 | |
| **West Central** [3] | 529 | 25,400 | 10,300 | 1,100 | 6,620 | 37 | 2,540 | 300 |
| Allegan | 123 | 850 | 280 | | 2,650 | | 470 | 40 |
| Berrien | 407 | 5,300 | 1,950 | 160 | 960 | 7,000 | 1,800 | 150 |
| Cass | 25 | 1,100 | 120 | | | | | |
| Kalamazoo | 24 | 250 | 140 | | | | | |
| Van Buren | 362 | 5,200 | 1,450 | 45 | 7,250 | 4,850 | 420 | 185 |
| **Southwest** [3] | 941 | 12,700 | 3,940 | 230 | 10,900 | 12,800 | 2,730 | 390 |
| North | 96 | 220 | 16 | 8 | 26 | | 15 | |
| Saginaw Bay | 59 | 150 | 7 | | 125 | | 16 | |
| Central | 64 | 620 | | 5 | 48 | | 8 | |
| West Thumb | 41 | 610 | 7 | 8 | 93 | | 16 | |
| East Thumb | 67 | 900 | 13 | 33 | 115 | | 95 | |
| South Central | 46 | 400 | 6 | | 26 | 81 | 10 | |
| Southeast | 83 | 800 | | 8 | 22 | 8 | 60 | |
| **East** [3] | 456 | 3,700 | 60 | 70 | 455 | 113 | 220 | 30 |
| **Michigan** | 2,377 | 47,500 | 30,800 | 8,700 | 18,000 | 13,500 | 5,700 | 1,000 |

--continued

**All fruit: Number of farms and acres, by county and district (continued)**

| County and district | Pears | Brambles | Cranberries | Nectarines | Strawberries | Other [1] | All fruit | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | 2001 | 1998 [2] |
| Antrim | 40 | | | | | 60 | 3,650 | 3,860 |
| Benzie | 16 | | | | | 54 | 2,470 | 2,920 |
| Grand Traverse | 45 | | | | | 50 | 7,210 | 7,770 |
| Leelanau | 26 | | | | 35 | 9 | 14,830 | 14,800 |
| Manistee | | | | | 65 | 30 | 2,440 | 3,520 |
| Other counties | | | 150 | | | 60 | 440 | 370 |
| **Northwest** | 150 | 40 | 150 | 3 | 132 | | 31,040 | 33,240 |
| Ionia | | | | | | 55 | 1,005 | 1,675 |
| Kent | | | | | 70 | 145 | 10,880 | 12,700 |
| Mason | 95 | | | | | 80 | 4,565 | 4,560 |
| Montcalm, Mecosta | | | | | | 100 | 1,050 | 1,145 |
| Muskegon | | | | | | 20 | 3,505 | 3,995 |
| Newaygo | | | | | | 135 | 2,130 | 2,585 |
| Oceana | 240 | | | | 20 | 110 | 14,105 | 14,250 |
| Ottawa | | | | | 25 | 165 | 9,700 | 9,760 |
| **West Central** | 385 | 40 | 20 | 15 | 183 | | 46,940 | 50,670 |
| | | | | | | | | |
| Allegan | 62 | | | | | 138 | 4,490 | 5,290 |
| Berrien | 85 | 140 | | | 80 | 70 | 17,695 | 20,175 |
| Cass | | | | | 50 | 550 | 1,820 | 2,190 |
| Kalamazoo | | | | | | 430 | 820 | 1,075 |
| Van Buren | 80 | | | | | 110 | 19,590 | 21,465 |
| **Southwest** | 230 | 170 | 65 | 90 | 170 | | 44,415 | 50,195 |
| North | 6 | 37 | | | 105 | 17 | 450 | 445 |
| Saginaw Bay | 10 | 14 | | | 64 | 9 | 395 | 455 |
| Central | | 33 | | | 130 | 11 | 855 | 1,205 |
| West Thumb | | 25 | | | 36 | 10 | 805 | 910 |
| East Thumb | 35 | 44 | | | 89 | 26 | 1,350 | 1,595 |
| South Central | 7 | 9 | | | 64 | 7 | 610 | 770 |
| Southeast | 19 | 48 | | | 77 | 18 | 1,060 | 1,250 |
| **East** | 85 | 210 | 15 | 2 | 565 | | 5,525 | 6,630 |
| **Michigan** | 850 | 460 | 250 | 110 | 1,050 | | 127,920 | 140,735 |

[1] Fruits combined to avoid disclosing data for individual operations.
[2] Includes apricots, excludes cranberries.
[3] Totals may not add due to combining fruits to avoid disclosing data for individual operations.

# Vegetables

Michigan vegetable growers produced 786,760 tons of fresh and processed vegetables in 2001. Harvested acreage was 113,800 and value of production was $223 million. Nationally, Michigan ranked seventh and fifth in fresh market and processing vegetable sales, respectively.

Most of the state's vegetables are grown in the southern half of the Lower Peninsula. Fresh market produce grown in Michigan is shipped to major markets throughout the nation. The amount of fresh market vegetables produced this year was 9.04 million hundredweight, a 6 percent increase from 2000. Many vegetable crops got off to a slow start due to a cool, wet spring. Hot and dry conditions from mid-June to mid-August depleted soil moisture cutting yields on non-irrigated vegetables significantly. The top ten vegetable counties were Oceana, St. Joseph, Van Buren, Allegan, Berrien, Newaygo, Mason, Gratiot, Ottawa, Lenawee, and Macomb. Processed vegetables are used by both in and out-of-state processors. Production amounted to 334,960 tons, down 14 percent from 2000. Michigan was the top state in pickle production.

Dual purpose vegetable acreage is used for both fresh market and processing. Nationally, Michigan ranked third for dual purpose asparagus production. Harvest progress was slowed by cool and wet weather conditions. Harvest continued until mid-June with few problems.

**Vegetables: Record highs and lows**

| Crop | Unit | Record high | | Record low | | Year estimates started |
|---|---|---|---|---|---|---|
| | | Quantity | Year | Quantity | Year | |
| **Asparagus** | | | | | | |
| Harvested | 1,000 acres | 23.0 | 1989 | 1.0 | 1928 | 1928 |
| Yield | Cwt | 31 | 1947 | 9 | 1981 | |
| Production | 1,000 cwt | 306 | 1995 | 17 | 1928 | |
| **Beans, snap (processing)** | | | | | | |
| Harvested | 1,000 acres | 27.0 | 1999 | 0.8 | 1921 | 1918 |
| Yield | Tons | 3.89 | 1998 | 0.60 | 1947 | |
| Production | Tons | 100,970 | 1999 | 600 | 1921 | |
| **Carrots** | | | | | | |
| Harvested | 1,000 acres | 7.7 | 1994 | 0.5 | 1929 | 1929 |
| Yield | Cwt | 398 | 1995 | 155 | 1957 | |
| Production | 1,000 cwt | 2,610 | 1995 | 132 | 1936 | |
| **Celery** | | | | | | |
| Harvested | 1,000 acres | 7.2 | 1941 | 1.8 | 1966,1968 | 1928 |
| Yield | Cwt | 520 | 1996 | 174 | 1935 | |
| Production | 1,000 cwt | 1,915 | 1941 | 576 | 1966 | |
| **Corn, sweet (fresh market)** | | | | | | |
| Harvested | 1,000 acres | 15.2 | 1961 | 9.0 | 1988 | 1949 |
| Yield | Cwt | 85 | 1994,1995,1996,1997 | 42 | 1949 | |
| Production | 1,000 cwt | 1,020 | 1994 | 525 | 1949 | |
| **Cucumbers (processing)** | | | | | | |
| Harvested | 1,000 acres | 46.3 | 1949 | 9.3 | 1932 | 1918 |
| Yield | Tons | 6.7 | 1987 | 0.6 | 1924 | |
| Production | Tons | 180,000 | 2000 | 8,900 | 1932 | |
| **Onions** | | | | | | |
| Harvested | 1,000 acres | 12.7 | 1935 | 4.1 | 1999 | 1928 |
| Yield | Cwt | 350 | 1960 | 120 | 1935 | |
| Production | 1,000 cwt | 2,833 | 1948 | 852 | 1928 | |
| **Tomatoes (fresh market)** | | | | | | |
| Harvested | 1,000 acres | 9.4 | 1943 | 2.3 | 1998 | 1928 |
| Yield | Cwt | 220 | 2001 | 60 | 1959 | |
| Production | 1,000 cwt | 797 | 1943 | 204 | 1988 | |
| **Tomatoes (processing)** | | | | | | |
| Harvested | 1,000 acres | 9.7 | 1982 | 1.0 | 1921 | 1918 |
| Yield | Tons | 36.0 | 1998 | 2.7 | 1943 | |
| Production | Tons | 205,000 | 1982 | 5,000 | 1921 | |

**Vegetables: Acres harvested and value of production, 1997-2001**

| Item | Unit | 1997 | 1998 | 1999 | 2000 [1] | 2001 [1] |
|---|---|---|---|---|---|---|
| Acres harvested | 1,000 acres | 113 | 107 | 114 | 123 | 114 |
| Value of production | 1,000 dollars | 170,356 | 183,399 | 177,903 | 219,240 | 222,700 |

[1] Includes crops for which no data were available before 2000.

**Principal vegetables, fresh market: Acres, production, and value, 1997-2001**

| Year | Planted | Harvested | Production | Value |
|---|---|---|---|---|
| | *Acres* | *Acres* | *1,000 cwt* | *1,000 dollars* |
| 1997 | 59,900 | 56,950 | 8,034 | 123,086 |
| 1998 | 56,600 | 53,550 | 7,307 | 136,522 |
| 1999 | 56,500 | 54,000 | 7,378 | 124,282 |
| 2000 [1] | 69,700 | 64,850 | 8,493 | 156,650 |
| 2001 [1] | 70,200 | 62,500 | 9,036 | 165,608 |

[1] Includes crops for which no data were available before 2000.

**Principal vegetables, processing: Acres, production, and value, 1997-2001**

| Year | Planted | Harvested | Production | Value |
|---|---|---|---|---|
| | *Acres* | *Acres* | *Tons* | *1,000 dollars* |
| 1997 | 57,900 | 56,400 | 394,500 | 47,270 |
| 1998 | 55,000 | 53,300 | 345,740 | 46,877 |
| 1999 | 61,500 | 59,900 | 390,370 | 53,621 |
| 2000 | 60,760 | 58,450 | 390,580 | 62,590 |
| 2001 | 54,500 | 51,300 | 334,960 | 57,098 |

**Vegetables, processing: Acres, production, and value, 1997-2001 [1]**

| Item and Year | Planted | Harvested | Yield | Production | Price per ton | Value |
|---|---|---|---|---|---|---|
| | *Acres* | *Acres* | *Tons* | *Tons* | *Dollars* | *1,000 dollars* |
| Carrots | | | | | | |
| 1997 | 1,600 | 1,500 | 25.00 | 37,500 | 62.40 | 2,340 |
| 1998 | 1,700 | 1,600 | 19.00 | 30,400 | 59.40 | 1,806 |
| 1999 | 1,600 | 1,500 | 26.00 | 39,000 | 67.60 | 2,636 |
| 2000 | 1,260 | 1,250 | 28.00 | 35,000 | 68.80 | 2,408 |
| 2001 | 1,300 | 1,300 | 25.00 | 32,500 | 69.00 | 2,243 |
| Cucumbers | | | | | | |
| 1997 | 27,000 | 26,000 | 5.20 | 135,200 | 152.00 | 20,550 |
| 1998 | 27,000 | 26,000 | 5.00 | 130,000 | 169.00 | 21,970 |
| 1999 | 27,000 | 26,500 | 6.00 | 159,000 | 164.00 | 26,076 |
| 2000 | 31,000 | 30,000 | 6.00 | 180,000 | 215.00 | 38,700 |
| 2001 | 32,500 | 30,000 | 5.20 | 156,000 | 246.00 | 38,376 |
| Snap beans | | | | | | |
| 1997 | 23,200 | 22,800 | 3.45 | 78,660 | 171.00 | 13,451 |
| 1998 | 21,500 | 21,000 | 3.89 | 81,600 | 171.00 | 13,973 |
| 1999 | 28,000 | 27,000 | 3.74 | 100,970 | 166.00 | 16,765 |
| 2000 | 25,500 | 24,400 | 3.75 | 91,580 | 160.00 | 14,678 |
| 2001 | 17,500 | 17,000 | 3.50 | 59,460 | 160.00 | 9,519 |
| Tomatoes | | | | | | |
| 1997 | 4,300 | 4,300 | 31.00 | 133,000 | 73.30 | 9,771 |
| 1998 | 2,600 | 2,500 | 36.00 | 90,000 | 84.00 | 7,560 |
| 1999 | 2,900 | 2,900 | 30.00 | 87,000 | 84.00 | 7,308 |
| 2000 | 3,000 | 2,800 | 30.00 | 84,000 | 81.00 | 6,804 |
| 2001 | 3,200 | 3,000 | 29.00 | 87,000 | 80.00 | 6,960 |

[1] Cabbage for sauerkraut and green peas are not published to avoid disclosure of individual operations.

**Vegetables, fresh market: Acres, production, and value, 1997-2001**

| Item and year | Planted | Harvested | Yield | Production | Price per cwt | Value [1] |
|---|---|---|---|---|---|---|
| | *Acres* | *Acres* | *Cwt* | *1,000 cwt* | *Dollars* | *1,000 dollars* |
| Beans, snap | | | | | | |
| 1997 | 1,700 | 1,600 | 45 | 72 | 29.80 | 2,146 |
| 1998 | 2,200 | 2,100 | 60 | 126 | 61.00 | 7,686 |
| 1999 | 2,200 | 2,200 | 40 | 88 | 31.00 | 2,728 |
| 2000 | 2,300 | 2,000 | 42 | 84 | 25.00 | 2,100 |
| 2001 | 2,600 | 2,100 | 25 | 53 | 45.00 | 2,385 |
| Cabbage | | | | | | |
| 1997 | 1,900 | 1,900 | 260 | 494 | 7.80 | 3,853 |
| 1998 | 1,800 | 1,700 | 260 | 442 | 13.30 | 5,879 |
| 1999 | 1,900 | 1,800 | 280 | 504 | 8.60 | 4,334 |
| 2000 | 1,800 | 1,700 | 250 | 425 | 12.80 | 5,440 |
| 2001 | 1,800 | 1,700 | 320 | 544 | 15.00 | 8,160 |
| Cantaloups | | | | | | |
| 1997 | 1,000 | 950 | 150 | 143 | 19.80 | 2,831 |
| 1998 | 800 | 750 | 150 | 113 | 19.00 | 2,147 |
| 1999 | 800 | 700 | 140 | 98 | 17.30 | 1,695 |
| 2000 | 800 | 750 | 140 | 105 | 15.30 | 1,607 |
| 2001 | 800 | 700 | 150 | 105 | 17.90 | 1,879 |
| Carrots | | | | | | |
| 1997 | 5,500 | 5,300 | 250 | 1,325 | 12.50 | 16,563 |
| 1998 | 4,700 | 4,600 | 290 | 1,334 | 13.10 | 17,475 |
| 1999 | 4,700 | 4,700 | 280 | 1,316 | 10.70 | 14,081 |
| 2000 | 4,700 | 4,500 | 280 | 1,260 | 13.40 | 16,884 |
| 2001 | 4,400 | 4,200 | 330 | 1,386 | 13.80 | 19,127 |
| Corn, sweet | | | | | | |
| 1997 | 12,500 | 11,500 | 85 | 978 | 17.80 | 17,048 |
| 1998 | 11,000 | 10,000 | 75 | 750 | 17.20 | 12,900 |
| 1999 | 11,500 | 10,600 | 70 | 742 | 17.90 | 13,282 |
| 2000 | 11,500 | 10,600 | 70 | 742 | 18.10 | 13,430 |
| 2001 | 12,000 | 10,300 | 60 | 618 | 25.00 | 15,450 |
| Cucumbers | | | | | | |
| 1997 | 6,500 | 6,400 | 200 | 1,280 | 14.10 | 18,048 |
| 1998 | 7,000 | 6,500 | 190 | 1,235 | 17.30 | 21,336 |
| 1999 | 7,000 | 6,600 | 220 | 1,452 | 15.50 | 22,506 |
| 2000 | 7,000 | 6,700 | 200 | 1,340 | 18.80 | 25,192 |
| 2001 | 7,100 | 5,900 | 220 | 1,298 | 19.00 | 24,662 |
| Onions | | | | | | |
| 1997 | 5,000 | 4,900 | 320 | 1,568 | 8.90 | 11,170 |
| 1998 | 4,500 | 4,200 | 260 | 1,092 | 11.00 | 9,614 |
| 1999 | 4,100 | 4,000 | 270 | 1,080 | 10.00 | 8,640 |
| 2000 | 4,100 | 3,500 | 270 | 945 | 12.50 | 9,450 |
| 2001 | 3,900 | 3,500 | 280 | 980 | 12.20 | 9,565 |
| Radishes | | | | | | |
| 2000 | 2,700 | 2,500 | 70 | 175 | 27.20 | 4,760 |
| 2001 | 2,700 | 2,500 | 70 | 175 | 27.20 | 4,760 |
| Tomatoes | | | | | | |
| 1997 | 3,000 | 2,500 | 160 | 400 | 24.20 | 9,680 |
| 1998 | 2,500 | 2,300 | 210 | 483 | 38.50 | 18,596 |
| 1999 | 2,800 | 2,600 | 190 | 494 | 33.50 | 16,549 |
| 2000 | 2,500 | 2,400 | 170 | 408 | 44.40 | 18,115 |
| 2001 | 2,600 | 2,400 | 220 | 528 | 35.00 | 18,480 |

[1] Onions = Value of sales.

**Vegetables, dual purpose: Acres, production, and value, 1997-2001**

| Item and year | Planted | Harvested | Yield | Production | Price per cwt | Value |
|---|---|---|---|---|---|---|
| | *Acres* | *Acres* | *Cwt* | *1,000 cwt* | *Dollars* | *1,000 dollars* |
| Asparagus | | | | | | |
| 1997 | 18,000 | 17,500 | 15 | 263 | 67.70 | 17,972 |
| 1998 | 17,500 | 17,000 | 16 | 278 | 62.30 | 17,320 |
| 1999 | 17,000 | 16,500 | 18 | 297 | 63.40 | 18,822 |
| 2000 | 17,000 | 16,500 | 17 | 283 | 63.90 | 18,075 |
| 2001 | 17,000 | 16,000 | 18 | 287 | 43.10 | 12,369 |
| Celery | | | | | | |
| 1997 | 2,500 | 2,300 | 470 | 1,081 | 13.30 | 14,358 |
| 1998 | 2,300 | 2,200 | 470 | 1,034 | 12.90 | 13,327 |
| 1999 | 2,000 | 1,900 | 450 | 855 | 12.90 | 11,005 |
| 2000 | 2,000 | 1,900 | 500 | 950 | 14.10 | 13,421 |
| 2001 | 2,100 | 2,000 | 420 | 840 | 15.20 | 12,741 |
| Peppers, bell | | | | | | |
| 1997 | 1,800 | 1,700 | 220 | 374 | 20.90 | 7,817 |
| 1998 | 1,900 | 1,800 | 200 | 360 | 24.00 | 8,640 |
| 1999 | 2,100 | 2,000 | 200 | 400 | 24.00 | 9,600 |
| 2000 | 2,200 | 2,100 | 220 | 462 | 22.50 | 10,395 |
| 2001 | 2,200 | 2,100 | 260 | 546 | 21.00 | 11,466 |
| Pumpkins | | | | | | |
| 2000 | 5,500 | 4,400 | 160 | 704 | 12.00 | 8,448 |
| 2001 | 4,000 | 3,600 | 160 | 576 | 14.00 | 8,064 |
| Squash | | | | | | |
| 2000 | 5,600 | 5,300 | 115 | 610 | 15.30 | 9,333 |
| 2001 | 7,000 | 5,500 | 200 | 1,100 | 15.00 | 16,500 |

**Asparagus: Utilization and value, 1997-2001**

| Year | Fresh market | | | Processing | | |
|---|---|---|---|---|---|---|
| | Production | Price per cwt | Value of production | Production | Price per ton | Value of production |
| | *1,000 cwt* | *Dollars* | *1,000 dollars* | *Tons* | *Dollars* | *1,000 dollars* |
| 1997 | 39 | 80.00 | 3,120 | 11,200 | 1,310 | 14,672 |
| 1998 | 36 | 65.00 | 2,340 | 12,080 | 1,240 | 14,980 |
| 1999 | 34 | 74.00 | 2,516 | 13,150 | 1,240 | 16,306 |
| 2000 | 41 | 69.00 | 2,829 | 12,100 | 1,260 | 15,246 |
| 2001 | 45 | 49.00 | 2,205 | 12,100 | 840 | 10,164 |

**U.S. Pickle stocks in tanks, barrels, and fresh pack, December 1, 1999-2001**

| Year | From current year crop | | | From previous year crop | | Total stocks |
|---|---|---|---|---|---|---|
| | Salt stock including dill | Fresh pack | Refrigerated | Salt stock including dill | Fresh pack | |
| | *Tons* | *Tons* | *Tons* | *Tons* | *Tons* | *Tons* |
| 1999 | 310,422 | 109,171 | 6,295 | 26,557 | | 452,445 |
| 2000 | 192,647 | 42,642 | 1,449 | 141,556 | 9,250 | 387,544 |
| 2001 | 285,902 | 129,986 | 12,426 | 123,989 | | 552,303 |

# Mushrooms

**Agaricus mushrooms: Area, sales, price, and value, 1996-2001 [1]**

| | Area [2] | Sales | Price per lb | Value |
|---|---|---|---|---|
| | *1,000 sq ft* | *1,000 lbs* | *Dollars* | *1,000 dollars* |
| 1996-97 | 2,572 | 13,638 | 1.080 | 14,679 |
| 1997-98 | 2,760 | 14,731 | 1.150 | 17,014 |
| 1998-99 | 2,767 | 10,106 | 1.200 | 12,141 |
| 1999-00 | 2,767 | 11,637 | 1.280 | 14,923 |
| 2000-01 [3] | | | | |

[1] Marketing year begins July 1 and ends June 30 of the following year.
[2] Total fillings.
[3] Data published only at the regional level.

# Horticulture

Michigan placed fourth nationally in value of wholesale sales of floriculture products in 2001. Only California, Florida, and Texas reported larger sales than Michigan. Reports from Michigan's 708 commercial growers ($10,000 or more in gross sales) showed an estimated wholesale value of $270.1 million for all surveyed floriculture crops, down 1 percent from last year's revised figure. This estimate includes summarized sales data as reported by growers with $100,000 or more in sales plus a calculated wholesale value of sales for operations with sales from $10,000 to $99,999. The leading crop category breakdowns for Michigan operations with more than $100,000 in sales were:

First, annual bedding/garden plants with $144 million in sales.
Second, herbaceous perennial plants with $45 million in sales.
Third, potted flowering plants with $30 million in sales.
Fourth propagative materials with $22 million in sales.

Michigan leads the nation in value of sales for 11 floriculture crops:

- Potted Geraniums (seed) with 15.5 million pots sold, valued at $12.1 million.
- Potted Hosta with 1.7 million pots sold, valued at $5 million.
- New Guinea Impatiens Hanging Baskets with 586,000 baskets sold, valued at $3.8 million.
- Geranium Hanging Baskets (cuttings) with 417,000 baskets sold, valued at $2.8 million.
- Impatiens Hanging Baskets with 376,000 baskets sold, valued at $2.1 million
- Geranium from Seed (flats) with 207,000 flats sold, valued at $1.7 million.
- Begonia Hanging Baskets with 278,000 baskets sold, valued at $1.7 million.
- Geranium from Vegetative Cuttings (flats) with 260,000 flats sold, valued at $1.4 million.
- New Guinea Impatiens Flats with 115,000 flats sold, valued at $1.1 million.
- Geranium Hanging Baskets (seed) with 101,000 baskets sold, valued at $588,000.
- Marigold Hanging Baskets with 4,000 baskets sold, valued at $22,000.

Other notable Michigan crops that ranked second in value of sales nationally were:

- Impatiens (flats) with 2.3 million flats sold, valued at $16.5 million
- Petunias (flats) with 1.5 million flats sold, valued at $10.4 million
- Potted Geraniums (cuttings) with 4.7 million pots sold, valued at $9.0 million
- Begonias (flats) with 1 million flats sold, valued at $7.2 million.
- Marigold (flats) with 794,000 flats sold, valued at $5.8 million.
- New Guinea Impatiens Pots with 3.1 million pots sold, valued at $4.3 million.
- Pansy/Viola Hanging Baskets with 33,000 baskets sold, valued at $184,000.

Total covered area for all operations in the state decreased less than 1 percent to 42.2 million square feet. This includes both rigid and film plastic greenhouses, glass greenhouses, shade, and temporary cover. Only California, Florida, and Texas have more total cover.

**Floriculture crops: Number of growers by gross value of sales, 1997-2001**

| Year | $10,000-$19,999 | $20,000-$39,000 | $40,000-$49,000 | $50,000-$99,999 | $100,000-$499,999 | $500,000 or more | Total growers |
|---|---|---|---|---|---|---|---|
| | *Number* | *Number* | *Number* | *Number* | *Number* | *Number* | *Number* |
| 1997 | 76 | 105 | 52 | 127 | 255 | 135 | 750 |
| 1998 | 77 | 111 | 45 | 139 | 263 | 111 | 746 |
| 1999 | 78 | 82 | 49 | 190 | 222 | 117 | 738 |
| 2000 | 74 | 89 | 44 | 170 | 239 | 131 | 747 |
| 2001 | 57 | 83 | 47 | 161 | 239 | 121 | 708 |

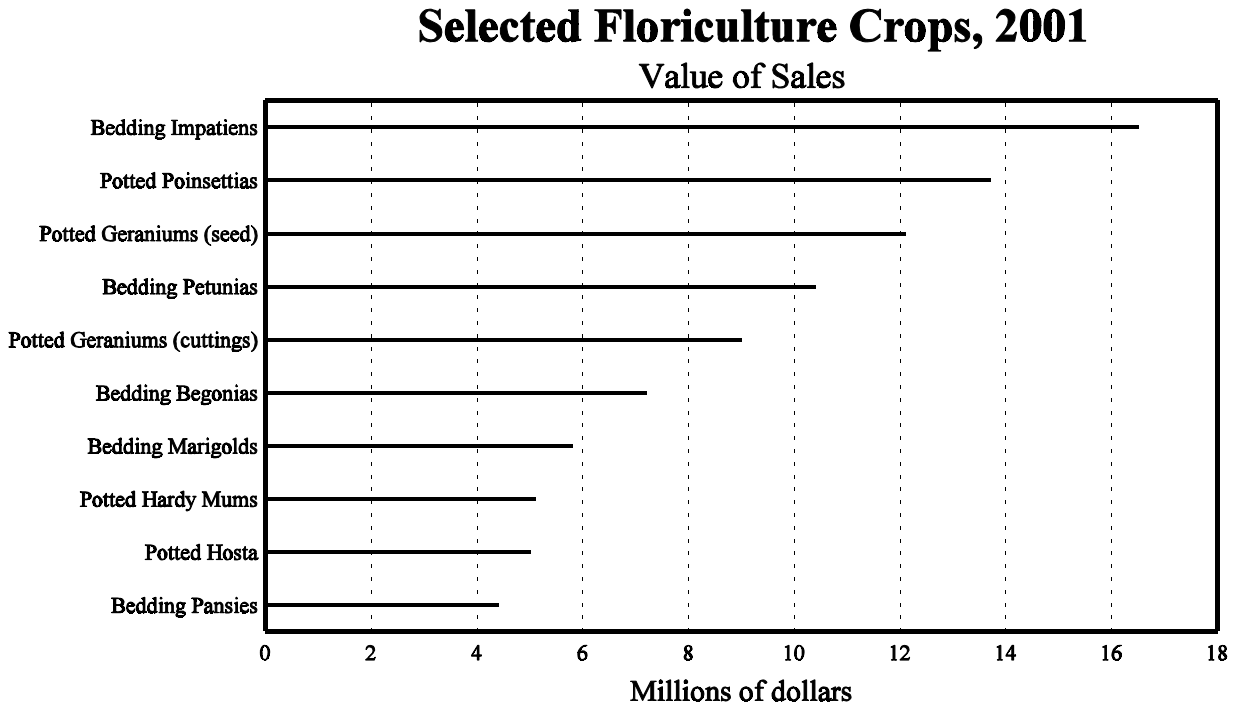
**Floriculture crops: Growing area by type of cover, 1997-2001**

| Year | Glass greenhouses | Fiberglass and other rigid greenhouses | Plastic film greenhouses | Total greenhouse cover | Shade and temporary cover | Total covered area | Open ground |
|---|---|---|---|---|---|---|---|
| | *1,000 square feet* | *1,000 square feet* | *1,000 square feet* | *1,000 square feet* | *1,000 square feet* | *1,000 square feet* | *Acres* |
| 1997 | 4,420 | 3,467 | 29,791 | 37,678 | 665 | 38,343 | 2,414 |
| 1998 | 4,515 | 3,643 | 33,174 | 41,332 | 836 | 42,168 | 2,298 |
| 1999 | 4,487 | 3,736 | 31,585 | 39,808 | 949 | 40,757 | 2,205 |
| 2000 | 4,441 | 4,096 | 32,665 | 41,202 | 1,106 | 42,308 | 3,299 |
| 2001 | 4,694 | 3,876 | 32,443 | 41,013 | 1,141 | 42,154 | 3,235 |

**Floriculture crops: Wholesale value of sales by category, 1997-2001**

| Year | Total cut flowers | Total potted flowering plants | Total foliage for indoor or patio use | Total bedding/ garden plants | Total wholesale value of reported crops [1] | Expanded wholesale value of reported crops [2] |
|---|---|---|---|---|---|---|
| | *1,000 dollars* | *1,000 dollars* | *1,000 dollars* | *1,000 dollars* | *1,000 dollars* | *1,000 dollars* |
| 1997 | 11,514 | 26,477 | 3,313 | 153,877 | 195,229 | 211,384 |
| 1998 | 8,551 | 27,621 | 3,056 | 172,615 | 211,509 | 228,444 |
| 1999 | 4,995 | 27,828 | 2,996 | 175,988 | 211,807 | 231,939 |
| 2000 | 7,624 | 32,363 | 3,601 | 188,648 | 254,953 | 273,517 |
| 2001 | 8,119 | 29,554 | 3,531 | 189,381 | 252,485 | 270,121 |

[1] Total data for 1999 and 2000 are not comparable; total sales of propagative material were added in 2000.
[2] Wholesale value of sales as reported by growers with $100,000 or more in sales of floriculture crops plus a calculated wholesale value of sales for growers with sales below $100,000. The value of sales for growers below the $100,000 level was estimated by multiplying the number of growers in each size group by the midpoint of each dollar range.



**Bedding plants: Producers, quantity sold, price, and value, 1997-2001**

| Item | Producers | Quantity sold | Percent of sales at wholesale | Wholesale price | Value of sales at wholesale |
|---|---|---|---|---|---|
| | *Number* | *1,000 flats* | *Percent* | *Dollars* | *1,000 dollars* |
| Begonias | | | | | |
| 2000 | 199 | 847 | 83 | 7.15 | 6,056 |
| 2001 | 209 | 1,025 | 86 | 7.06 | 7,237 |
| Geraniums | | | | | |
| 1997 | 117 | 394 | 85 | 9.26 | 3,648 |
| 1998 | 97 | 783 | 94 | 7.02 | 5,497 |
| 1999 | 99 | 757 | 88 | 8.28 | 6,268 |
| 2000 | | | | | |
| 2001 | | | | | |
| Geraniums from cuttings | | | | | |
| 2000 | 43 | 292 | 78 | 6.21 | 1,813 |
| 2001 | 28 | 260 | 80 | 5.48 | 1,425 |
| Geraniums from seed | | | | | |
| 2000 | 50 | 219 | 93 | 8.11 | 1,776 |
| 2001 | 53 | 207 | 93 | 8.33 | 1,724 |
| Impatiens | | | | | |
| 1997 | 270 | 2,565 | 87 | 6.37 | 16,339 |
| 1998 | 269 | 3,314 | 81 | 5.88 | 19,486 |
| 1999 | 249 | 2,912 | 82 | 6.47 | 18,841 |
| 2000 | 251 | 2,403 | 83 | 6.81 | 16,364 |
| 2001 | 243 | 2,348 | 83 | 7.04 | 16,530 |
| Marigolds | | | | | |
| 2000 | 205 | 789 | 89 | 6.87 | 5,420 |
| 2001 | 214 | 794 | 86 | 7.35 | 5,836 |
| New Guinea Impatiens | | | | | |
| 1997 | 48 | 65 | 53 | 12.27 | 798 |
| 1998 | 36 | 86 | 85 | 8.25 | 710 |
| 1999 | 58 | 151 | 84 | 9.21 | 1,391 |
| 2000 | 46 | 125 | 91 | 8.21 | 1,026 |
| 2001 | 41 | 115 | 86 | 9.38 | 1,079 |
| Pansies/Violas | | | | | |
| 2000 | 195 | 679 | 90 | 6.67 | 4,529 |
| 2001 | 200 | 637 | 89 | 6.94 | 4,421 |
| Petunias | | | | | |
| 1997 | 269 | 1,522 | 87 | 6.84 | 10,410 |
| 1998 | 272 | 1,787 | 79 | 5.96 | 10,651 |
| 1999 | 250 | 1,651 | 85 | 6.35 | 10,484 |
| 2000 | 268 | 1,502 | 85 | 6.76 | 10,154 |
| 2001 | 259 | 1,486 | 86 | 7.00 | 10,402 |
| Other flowering and foliar | | | | | |
| 1997 | 296 | 6,561 | 87 | 6.69 | 43,893 |
| 1998 | 291 | 7,152 | 84 | 5.83 | 41,696 |
| 1999 | 259 | 7,683 | 88 | 6.36 | 48,864 |
| 2000 | 258 | 4,506 | 86 | 6.89 | 31,046 |
| 2001 | 244 | 4,006 | 86 | 6.91 | 27,681 |
| Vegetables [1] | | | | | |
| 1997 | 254 | 1,026 | 87 | 6.15 | 6,310 |
| 1998 | 189 | 1,008 | 72 | 6.69 | 6,744 |
| 1999 | 210 | 827 | 85 | 6.69 | 5,533 |
| 2000 | 218 | 720 | 83 | 6.99 | 5,033 |
| 2001 | 187 | 567 | 82 | 6.97 | 3,952 |

[1] Does not include vegetable transplants grown for commercial use.

**Hanging baskets: Producers, quantity sold, price, and value, 1997-2001**

| Item | Producers | Quantity sold | Percent of sales at wholesale | Wholesale price | Value of sales at wholesale |
|---|---|---|---|---|---|
| | *Number* | *1,000 baskets* | *Percent* | *Dollars* | *1,000 dollars* |
| Begonias | | | | | |
| 2000 | 148 | 261 | 83 | 5.61 | 1,464 |
| 2001 | 146 | 278 | 82 | 5.95 | 1,654 |
| Geraniums | | | | | |
| 1997 | 269 | 528 | 80 | 6.02 | 3,179 |
| 1998 | 230 | 497 | 71 | 6.46 | 3,211 |
| 1999 | 240 | 685 | 67 | 6.41 | 4,391 |
| 2000 | | | | | |
| 2001 | | | | | |
| Geraniums from cuttings | | | | | |
| 2000 | 211 | 485 | 73 | 6.39 | 3,099 |
| 2001 | 200 | 417 | 76 | 6.71 | 2,798 |
| Geraniums from seed | | | | | |
| 2000 | 23 | 58 | 70 | 5.85 | 339 |
| 2001 | 30 | 101 | 76 | 5.82 | 588 |
| Impatiens | | | | | |
| 1997 | 246 | 498 | 85 | 4.62 | 2,301 |
| 1998 | 210 | 406 | 76 | 4.90 | 1,989 |
| 1999 | 218 | 438 | 79 | 4.94 | 2,164 |
| 2000 | 195 | 411 | 85 | 4.95 | 2,034 |
| 2001 | 187 | 376 | 86 | 5.49 | 2,064 |
| Marigolds | | | | | |
| 2000 | 5 | 2 | 94 | 5.89 | 12 |
| 2001 | 3 | 4 | 100 | 5.61 | 22 |
| New Guinea Impatiens | | | | | |
| 1997 | 250 | 566 | 86 | 6.29 | 3,560 |
| 1998 | 233 | 574 | 80 | 6.28 | 3,605 |
| 1999 | 229 | 727 | 73 | 6.41 | 4,660 |
| 2000 | 226 | 607 | 82 | 6.45 | 3,915 |
| 2001 | 219 | 586 | 83 | 6.51 | 3,815 |
| Pansies/Violas | | | | | |
| 2000 | 30 | 36 | 96 | 5.65 | 203 |
| 2001 | 27 | 33 | 87 | 5.57 | 184 |
| Petunias | | | | | |
| 1997 | 202 | 185 | 82 | 5.07 | 938 |
| 1998 | 183 | 164 | 76 | 5.12 | 840 |
| 1999 | 210 | 252 | 80 | 5.27 | 1,328 |
| 2000 | 178 | 251 | 85 | 4.96 | 1,245 |
| 2001 | 168 | 236 | 79 | 5.66 | 1,336 |
| Other flowering | | | | | |
| 1997 | 297 | 1,675 | 85 | 5.61 | 9,397 |
| 1998 | 244 | 1,465 | 71 | 6.12 | 8,966 |
| 1999 | 262 | 1,935 | 85 | 5.92 | 11,455 |
| 2000 | 189 | 1,346 | 82 | 5.95 | 8,009 |
| 2001 | 178 | 1,167 | 82 | 6.22 | 7,259 |
| Foliage | | | | | |
| 1997 | 68 | 408 | 95 | 4.18 | 1,705 |
| 1998 | 47 | 253 | 90 | 4.57 | 1,156 |
| 1999 | 55 | 315 | 93 | 5.06 | 1,594 |
| 2000 | 64 | 299 | 93 | 5.54 | 1,656 |
| 2001 | 52 | 306 | 95 | 4.95 | 1,515 |

**Herbaceous perennials: Producers, quantity sold, price, and value, 2000**

| Item | Producers | Quantity sold | | | | Percent of sales at wholesale | Wholesale price | | | Value of All sales at wholesale |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Less than 1 gallon | 1 to 2 gallon | 2 gallon and larger | Total | | Less than 1 gallon | 1 to 2 gallon | 2 gallon and larger | |
| | *Number* | *1,000 pots* | *1,000 pots* | *1,000 pots* | *1,000 pots* | *percent* | *Dollars* | *Dollars* | *Dollars* | *1,000 dollars* |
| Hosta | | | | | | | | | | |
| 2000 | 106 | 996 | 1,040 | 40 | 2,076 | 93 | 2.75 | 3.76 | 7.21 | 6,938 |
| 2001 | 111 | 584 | 1,073 | 46 | 1,703 | 94 | 2.76 | 2.89 | 6.43 | 5,009 |
| Other | | | | | | | | | | |
| 2000 | 131 | 13,634 | 3,613 | 162 | 17,409 | 94 | 1.03 | 3.61 | 6.05 | 28,066 |
| 2001 | 136 | 13,890 | 5,110 | 317 | 19,317 | 94 | 1.25 | 3.06 | 5.90 | 34,869 |

**Potted flowering and annual bedding plants: Producers, quantity sold, price, and value, 1997-2001**

| Item | Producers | Quantity sold | | | Percent of sales at wholesale | Wholesale price | | Value of sales at wholesale |
|---|---|---|---|---|---|---|---|---|
| | | Less than 5 inch pots | 5 inch pots or larger | Total | | Less than 5 inch pots | 5 inch pots or larger | |
| | *Number* | *1,000 pots* | *1,000 pots* | *1,000 pots* | *Percent* | *Dollars* | *Dollars* | *1,000 dollars* |
| Azaleas | | | | | | | | |
| 1997 | 49 | 41 | 179 | 220 | 87 | 1.86 | 6.74 | 1,267 |
| 1998 | 39 | 19 | 164 | 183 | 85 | 3.14 | 6.65 | 1,177 |
| 1999 | 34 | 16 | 149 | 165 | 84 | 3.27 | 6.81 | 1,113 |
| 2000 | 36 | 31 | 116 | 147 | 83 | 3.16 | 7.20 | 933 |
| 2001 | 34 | 14 | 110 | 124 | 69 | 3.47 | 6.64 | 779 |
| Begonias | | | | | | | | |
| 2000 | 65 | 397 | 31 | 428 | 63 | 1.05 | 1.92 | 476 |
| 2001 | 69 | 577 | 38 | 615 | 61 | 1.26 | 3.01 | 841 |
| Chrysanthemums, florist | | | | | | | | |
| 1997 | 46 | 125 | 580 | 705 | 95 | 1.57 | 3.98 | 2,505 |
| 1998 | 41 | 100 | 458 | 558 | 95 | 1.49 | 3.91 | 1,940 |
| 1999 | 41 | 153 | 434 | 587 | 93 | 1.42 | 3.88 | 1,901 |
| 2000 | 38 | 127 | 320 | 447 | 87 | 1.69 | 3.87 | 1,453 |
| 2001 | 46 | 162 | 647 | 809 | 64 | 1.48 | 3.78 | 2,685 |
| Chrysanthemums, hardy garden | | | | | | | | |
| 1997 | 149 | 574 | 2,221 | 2,765 | 90 | 0.80 | 1.96 | 4,812 |
| 1998 | 139 | 637 | 2,294 | 2,931 | 86 | 0.91 | 1.74 | 4,571 |
| 1999 | 131 | 828 | 2,692 | 3,520 | 93 | 0.99 | 2.18 | 6,688 |
| 2000 | 131 | 631 | 2,487 | 3,118 | 90 | 1.11 | 1.79 | 5,152 |
| 2001 | | | | | | | | |
| Geraniums from cuttings | | | | | | | | |
| 1997 | 218 | 3,376 | 818 | 4,194 | 71 | 1.53 | 2.69 | 7,366 |
| 1998 | 228 | 6,355 | 1,173 | 7,528 | 78 | 1.33 | 2.55 | 11,443 |
| 1999 | 203 | 5,709 | 1,434 | 7,143 | 81 | 1.32 | 2.41 | 10,992 |
| 2000 | 222 | 3,298 | 1,369 | 4,667 | 67 | 1.54 | 2.43 | 8,406 |
| 2001 | 217 | 3,206 | 1,489 | 4,695 | 71 | 1.62 | 2.53 | 8,961 |
| Geraniums from seed | | | | | | | | |
| 1997 | 127 | 19,078 | 693 | 19,771 | 98 | 0.75 | 2.30 | 15,902 |
| 1998 | 110 | 14,360 | 13 | 14,373 | 95 | 0.74 | 2.86 | 10,664 |
| 1999 | 104 | 14,469 | 108 | 14,577 | 97 | 0.72 | 2.99 | 10,741 |
| 2000 | 112 | 17,662 | 54 | 17,716 | 95 | 0.76 | 3.88 | 13,633 |
| 2001 | 100 | 15,426 | 39 | 15,465 | 95 | 0.77 | 5.45 | 12,091 |
| New Guinea Impatiens | | | | | | | | |
| 1997 | 174 | 1,340 | 229 | 1,569 | 84 | 1.18 | 3.38 | 2,355 |
| 1998 | 193 | 1,469 | 234 | 1,703 | 79 | 1.14 | 3.49 | 2,491 |
| 1999 | 174 | 1,832 | 270 | 2,102 | 86 | 1.12 | 2.92 | 2,840 |
| 2000 | 190 | 2,848 | 287 | 3,135 | 89 | 1.10 | 3.93 | 4,261 |
| 2001 | 178 | 2,746 | 308 | 3,054 | 90 | 1.23 | 3.12 | 4,339 |
| Pansies/Violas | | | | | | | | |
| 2000 | 34 | 329 | 58 | 387 | 80 | 0.67 | 4.83 | 501 |
| 2001 | 25 | 280 | 64 | 344 | 80 | 0.66 | 1.93 | 308 |

See footnote(s) at end of table.

--continued

**Potted flowering and annual bedding plants: Producers, quantity sold, price, and value, 1997-2001 (continued)**

| Item | Producers | Quantity sold | | | Percent of sales at wholesale | Wholesale price | | Value of sales at wholesale |
|---|---|---|---|---|---|---|---|---|
| | | Less than 5 inch pots | 5 inch pots or larger | Total | | Less than 5 inch pots | 5 inch pots or larger | |
| | *Number* | *1,000 pots* | *1,000 pots* | *1,000 pots* | *Percent* | *Dollars* | *Dollars* | *1,000 dollars* |
| Petunias | | | | | | | | |
| 1997 | 45 | 143 | 87 | 230 | 86 | 0.80 | 1.86 | 276 |
| 1998 | 45 | 119 | 56 | 175 | 75 | 0.76 | 2.56 | 234 |
| 1999 | 61 | 179 | 190 | 369 | 92 | 0.97 | 2.10 | 573 |
| 2000 | 64 | 390 | 336 | 726 | 63 | 1.15 | 1.92 | 1,094 |
| 2001 | 49 | 360 | 243 | 603 | 56 | 1.12 | 2.16 | 928 |
| Poinsettias | | | | | | | | |
| 1997 | 118 | 1,099 | 2,711 | 3,810 | 91 | 1.61 | 3.80 | 12,071 |
| 1998 | 100 | 1,111 | 2,584 | 3,695 | 83 | 2.01 | 3.96 | 12,466 |
| 1999 | 94 | 1,029 | 2,894 | 3,923 | 90 | 1.70 | 3.98 | 13,267 |
| 2000 | 97 | 1,375 | 3,138 | 4,513 | 87 | 1.23 | 3.88 | 13,867 |
| 2001 | 101 | 1,342 | 3,057 | 4,399 | 87 | 1.17 | 3.98 | 13,737 |
| Roses, florist | | | | | | | | |
| 2000 | 14 | 67 | 37 | 104 | 90 | 2.25 | 4.24 | 308 |
| 2001 | 17 | 52 | 55 | 107 | 95 | 2.69 | 4.23 | 373 |
| Flowering bulbs | | | | | | | | |
| 2000 | 43 | 735 | 999 | 1,734 | 97 | 1.59 | 3.31 | 4,475 |
| 2001 | 47 | 821 | 665 | 1,486 | 96 | 1.48 | 3.40 | 3,476 |
| Other flowering plants | | | | | | | | |
| 1997 | 83 | 1,271 | 880 | 2,151 | 93 | 1.10 | 3.50 | 4,478 |
| 1998 | 91 | 1,171 | 1,013 | 2,184 | 94 | 1.41 | 3.67 | 5,369 |
| 1999 | 61 | 1,023 | 1,377 | 2,400 | 92 | 1.51 | 2.89 | 5,524 |
| 2000 | 66 | 982 | 722 | 1,704 | 88 | 1.64 | 4.43 | 4,809 |
| 2001 | 55 | 805 | 485 | 1,290 | 84 | 1.61 | 3.54 | 3,013 |
| Other flowering and foliar type bedding plants | | | | | | | | |
| 1997 | 196 | 12,632 | 3,689 | 16,321 | 87 | 0.91 | 2.61 | 21,123 |
| 1998 | 215 | 8,427 | 8,740 | 17,167 | 83 | 1.07 | 3.38 | 38,558 |
| 1999 | 198 | 10,519 | 5,595 | 16,114 | 82 | 1.08 | 2.95 | 27,866 |
| 2000 | 131 | 9,571 | 1,848 | 11,419 | 80 | 1.01 | 2.87 | 14,970 |
| 2001 | 121 | 9,049 | 1,372 | 10,421 | 82 | 1.16 | 3.49 | 15,285 |
| Vegetable type [1] | | | | | | | | |
| 1997 | 105 | 642 | 282 | 924 | 82 | 0.84 | 2.01 | 1,106 |
| 1998 | 66 | 470 | 153 | 623 | 64 | 0.77 | 1.28 | 558 |
| 1999 | 77 | 651 | 230 | 881 | 81 | 0.61 | 1.43 | 726 |
| 2000 | 73 | 871 | 135 | 1,006 | 88 | 0.65 | 1.79 | 808 |
| 2001 | 65 | 594 | 169 | 763 | 90 | 0.86 | 1.54 | 771 |

[1] Does not include vegetable transplants grown for commercial use.

# Livestock, Dairy, and Poultry

**Livestock: Record highs and lows**

| Livestock | Unit | Record high | | Record low | | Year estimates started |
|---|---|---|---|---|---|---|
| | | Quantity | Year | Quantity | Year | |
| Cattle and calves | 1,000 head | 2,036 | 1944 | 538 | 1867 | 1867 |
| Cattle on feed | 1,000 head | 200 | 2000 | 57 | 1931 | 1930 |
| Chickens, all [1] | 1,000 birds | 15,512 | 1944 | 6,190 | 1997 | 1924 |
| Cows, beef | 1,000 head | 239 | 1977 | 24 | 1925,1933 | 1920 |
| Cows, milk | 1,000 head | 1,080 | 1945 | 225 | 1867 | 1867 |
| Eggs [2] | Million eggs | 1,697 | 1944 | 1,104 | 1929 | 1924 |
| Hogs and pigs [1] | 1,000 head | 1,397 | 1943 | 512 | 1934 | 1867 |
| Honey | 1,000 pounds | 11,780 | 1939 | 4,386 | 1980 | 1921 |
| Milk | Million pounds | 5,855 | 2001 | 3,941 | 1927 | 1924 |
| Sheep | 1,000 head | 3,100 | 1867 | 62 | 1999 | 1867 |
| Wool | 1,000 pounds | 8,424 | 1934 | 430 | 1998 | 1934 |

[1] December 1.
[2] December 1 previous year to November 30.

# Cattle and Calves

The January 1, 2002, Michigan cattle herd totaled 990,000 head, up 1 percent from a year ago. The January 1 milk cow inventory, at 297,000 head, was down 3,000 head from the previous year. Milk cow replacement heifers, at 135,000, were up 5,000 head. Beef cows, at 73,000 head, were down 14 percent from last year. Beef cow replacement heifers, at 30,000 head, were down 5,000 head. Calves on hand, at 198,000 head, were up 20,000 from last year. Steer numbers, at 195,000 head, were up 5,000. Other heifers and bulls, at 45,000 and 17,000 head respectively, were unchanged. The 2001 calf crop was 335,000 head, 10,000 less than the previous year. Cattle on full feed for slaughter totaled 190,000 head, unchanged from last year. Michigan has 15,500 operations with cattle, down 500 from a year ago.

The January 1 Michigan cattle and calf inventory was valued at $901 million, up 9 percent from January 1, 2001. Cash receipts from cattle and calf marketings totaled $228 million, while total liveweight marketed was 377 million pounds.

**Cattle and calves: Number of operations by size group, 1997-2001 [1]**

| Size group by head | Year | | | | |
|---|---|---|---|---|---|
| | 1997 | 1998 | 1999 | 2000 | 2001 |
| 1-49 head | 11,500 | 11,000 | 11,200 | 11,200 | 10,700 |
| 50-99 head | 2,800 | 2,280 | 2,170 | 2,200 | 2,200 |
| 100-499 head | 3,000 | 2,500 | 2,400 | 2,350 | 2,350 |
| 500-999 head | 160 | 160 | 170 | 190 | 180 |
| 1000 + head | 40 | 60 | 60 | 60 | 70 |
| Total | 17,500 | 16,000 | 16,000 | 16,000 | 15,500 |

[1] An operation is any place having one or more head of cattle on hand at any time during the year.

**Cattle and calves: Number on farms by class, January 1, 1998-2002**

| Class | 1998 | 1999 | 2000 | 2001 | 2002 |
|---|---|---|---|---|---|
| | *1,000 head* | *1,000 head* | *1,000 head* | *1,000 head* | *1,000 head* |
| All cows that have calved | 415 | 405 | 395 | 385 | 370 |
| Beef cows | 115 | 105 | 95 | 85 | 73 |
| Milk cows | 300 | 300 | 300 | 300 | 297 |
| Heifers, 500 pounds and over | 210 | 222 | 205 | 210 | 210 |
| Beef cow replacement | 30 | 32 | 30 | 35 | 30 |
| Milk cow replacement | 140 | 145 | 125 | 130 | 135 |
| Other | 40 | 45 | 50 | 45 | 45 |
| Steers, 500 pounds and over | 195 | 195 | 200 | 190 | 195 |
| Bulls, 500 pounds and over | 20 | 18 | 18 | 17 | 17 |
| Calves, under 500 pounds | 210 | 210 | 192 | 178 | 198 |
| All cattle and calves | 1,050 | 1,050 | 1,010 | 980 | 990 |

**Cattle and calves: Production and income, 1997-2001**

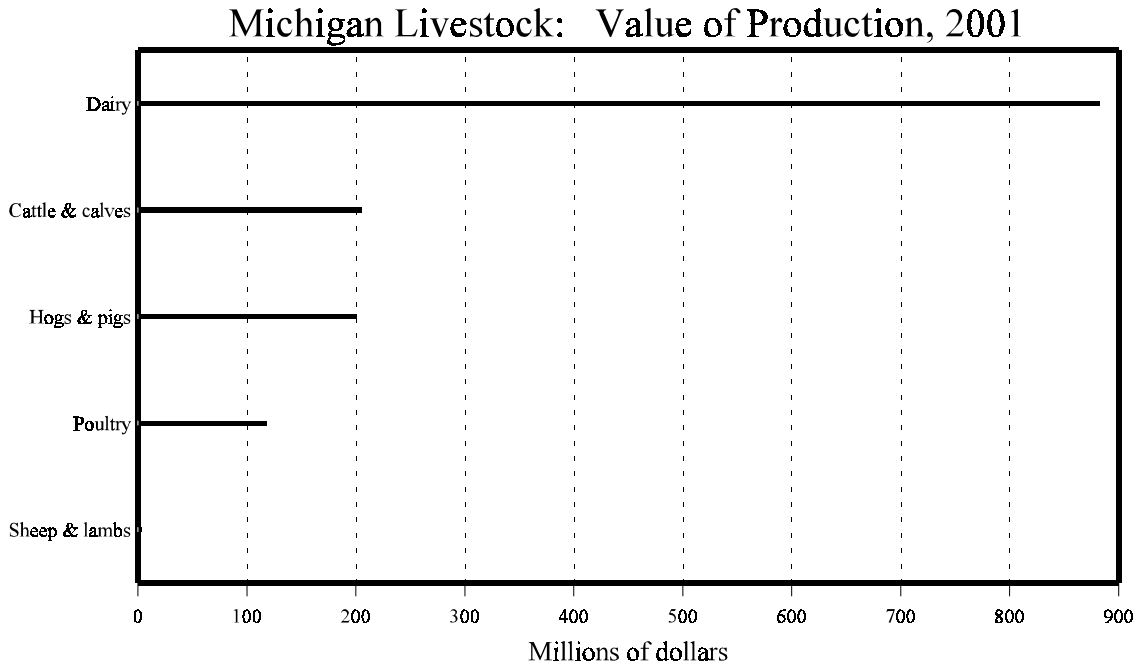
| Year | Production [1] | Marketings [2] | Average price per cwt | | Value of production | Cash receipts [4] | Value of home consumption | Gross income |
|---|---|---|---|---|---|---|---|---|
| | | | All beef [3] | Calves | | | | |
| | *1,000 pounds* | *1,000 pounds* | *Dollars* | *Dollars* | *1,000 dollars* | *1,000 dollars* | *1,000 dollars* | *1,000 dollars* |
| 1997 | 386,581 | 453,480 | 50.80 | 54.00 | 197,154 | 230,906 | 7,913 | 238,819 |
| 1998 | 385,229 | 411,250 | 47.70 | 51.70 | 183,321 | 196,656 | 7,465 | 204,121 |
| 1999 | 405,770 | 461,250 | 50.50 | 68.90 | 200,427 | 235,829 | 8,067 | 243,896 |
| 2000 | 407,661 | 446,600 | 56.00 | 102.00 | 220,474 | 255,892 | 9,183 | 265,075 |
| 2001 | 353,634 | 376,750 | 58.80 | 109.00 | 204,736 | 227,930 | 7,467 | 235,397 |

[1] Adjustments made for changes in inventory and for inshipments.
[2] Excludes custom slaughter for use on farms where produced and inter-farm sales within the State.
[3] Combined price for "Cows" and "Steers and Heifers".
[4] Receipts from marketings and sale of farm slaughter.

**Cattle and calves: Balance sheet, 1997-2001**

| Year | All cattle and calves on hand January 1 | Calf crop | Inshipments | Marketings [1] | | Farm slaughter cattle and calves [2] | Deaths | | All cattle and calves on hand following January 1 |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Cattle | Calves | | Cattle | Calves | |
| | *1,000 head* | *1,000 head* | *1,000 head* | *1,000 head* | *1,000 head* | *1,000 head* | *1,000 head* | *1,000 head* | *1,000 head* |
| 1997 | 1,100 | 385 | 70 | 363 | 53 | 5 | 25 | 59 | 1,050 |
| 1998 | 1,050 | 365 | 65 | 308 | 37 | 5 | 25 | 55 | 1,050 |
| 1999 | 1,050 | 355 | 70 | 338 | 47 | 5 | 25 | 50 | 1,010 |
| 2000 | 1,010 | 345 | 55 | 318 | 38 | 5 | 22 | 47 | 980 |
| 2001 | 980 | 335 | 50 | 266 | 36 | 4 | 24 | 45 | 990 |

[1] Includes custom slaughter and state outshipments, but excludes inter-farm sales within the State.
[2] Excludes custom slaughter for farmers at commercial establishments.



# Poultry

The total value of poultry production in Michigan from eggs, turkeys, and other chickens (primarily culled layers) during 2001 was $117.89 million, 21 percent more than a year earlier. The value of egg production totaled $61.06 million, up 8 percent from 2000. Egg production totaled 1.677 billion eggs, up 4 percent from last year. The market egg price averaged 44 cents per dozen, up 4 percent from 2000. The value of turkey production during 2001 was $56.70 million, up 40 percent. The total pounds of turkey produced was 162 million, up 36 percent. The average price per pound was 35 cents, up 1 cent from last year. Other chicken production, at 3.66 million birds, was up 13 percent. Other chicken production was valued at $128,000, down 28 percent from 2000.

**Chickens: Layers on hand, December 1, 1997-2001**

| Class | 1997 | 1998 | 1999 | 2000 | 2001 |
|---|---|---|---|---|---|
| | *1,000 head* | *1,000 head* | *1,000 head* | *1,000 head* | *1,000 head* |
| Layers, 1 year old and older | 2,343 | 3,310 | 2,174 | 3,480 | 4,491 |
| Layers, 20 weeks old but less than 1 year | 2,817 | 2,441 | 4,013 | 2,825 | 2,243 |
| Pullets, 13-20 weeks old | 390 | 286 | 537 | 569 | 285 |
| Pullets, less than 13 weeks | 630 | 704 | 1,060 | 721 | 985 |
| Other chickens | 10 | 3 | 3 | 1 | 1 |
| All chickens (excluding broilers) | 6,190 | 6,744 | 7,787 | 7,596 | 8,005 |

**Turkeys: Production and value, 1999-2001 [1]**

| Year | Number raised [2] | Pounds produced | Price per pound [3] | Value of production |
|---|---|---|---|---|
| | *Thousands* | *1,000 pounds* | *Cents* | *1,000 dollars* |
| 1999 | 2,700 | 85,590 | 41.1 | 35,092 |
| 2000 | 3,500 | 119,000 | 34.0 | 40,460 |
| 2001 | 4,500 | 162,000 | 35.0 | 56,700 |

[1] December 1 previous year through November 30.
[2] Based on turkeys placed Sep 1 through Aug 31. Excludes young turkeys lost.
[3] Equivalent live weight returns to producers.

**All eggs: Production and value, 1997-2001**

| Year | Eggs produced | Price per dozen | Value of production |
|---|---|---|---|
| | *Million* | *Dollars* | *1,000 dollars* |
| 1997 | 1,327 | 0.560 | 61,927 |
| 1998 | 1,395 | 0.496 | 57,639 |
| 1999 | 1,533 | 0.420 | 53,655 |
| 2000 | 1,617 | 0.419 | 56,464 |
| 2001 | 1,677 | 0.437 | 61,063 |

**All egg production, by month, 1997-2001**

| Month | 1997 | 1998 | 1999 | 2000 | 2001 |
|---|---|---|---|---|---|
| | *Million eggs* | *Million eggs* | *Million eggs* | *Million eggs* | *Million eggs* |
| December | 115 | 115 | 132 | 140 | 142 |
| January | 110 | 111 | 130 | 134 | 139 |
| February | 100 | 102 | 115 | 122 | 127 |
| March | 112 | 120 | 129 | 143 | 149 |
| April | 110 | 110 | 122 | 135 | 144 |
| May | 109 | 111 | 121 | 130 | 142 |
| June | 105 | 111 | 117 | 131 | 139 |
| July | 111 | 118 | 130 | 142 | 141 |
| August | 114 | 124 | 137 | 137 | 133 |
| September | 113 | 120 | 129 | 131 | 129 |
| October | 117 | 126 | 134 | 136 | 143 |
| November | 111 | 125 | 136 | 135 | 148 |
| Total [1] | 1,327 | 1,395 | 1,533 | 1,617 | 1,677 |

[1] Sum of months may not add to total due to rounding.

**All layers: Average number on hand during the month, 1997-2001**

| Month | 1997 | 1998 | 1999 | 2000 | 2001 |
|---|---|---|---|---|---|
| | *1,000 head* | *1,000 head* | *1,000 head* | *1,000 head* | *1,000 head* |
| December | 5,016 | 5,196 | 5,763 | 6,206 | 6,155 |
| January | 5,021 | 5,058 | 5,770 | 6,178 | 6,114 |
| February | 5,115 | 5,098 | 5,898 | 6,271 | 6,315 |
| March | 5,136 | 5,282 | 5,923 | 6,484 | 6,700 |
| April | 5,089 | 5,202 | 5,656 | 6,321 | 6,802 |
| May | 5,024 | 5,128 | 5,659 | 6,136 | 6,643 |
| June | 5,046 | 5,097 | 5,799 | 6,325 | 6,537 |
| July | 4,980 | 5,291 | 5,863 | 6,379 | 6,370 |
| August | 5,010 | 5,541 | 5,827 | 6,168 | 6,369 |
| September | 5,086 | 5,586 | 5,847 | 6,073 | 6,473 |
| October | 5,150 | 5,621 | 6,089 | 6,110 | 6,567 |
| November | 5,210 | 5,704 | 6,189 | 6,209 | 6,659 |
| Annual [1] | 5,073 | 5,318 | 5,856 | 6,238 | 6,475 |

[1] December 1 previous year through November 30.

# Hogs and Pigs

Michigan hog production totaled 488 million pounds in 2001, up 5 percent from 2000. Based on the December 1, 2001 inventory of 960,000 hogs and pigs, Michigan ranked 13th in the nation in terms of inventory.

Breeding inventory accounted for 11.5 percent of the total inventory, while market hogs made up the remaining 88.5 percent. Historically, Cass, Allegan, Ottawa, Branch and Huron have been the top five hog producing counties.

The annual average price for all hogs was $41.70 per cwt for 2001, compared with the 2000 average price of $40.70 per cwt.

Marketings of all hogs and pigs totaled 496.8 million pounds in 2001, up 3 percent from 2000. Cash receipts increased 5 percent from the previous year to $211 million.

**Hogs and pigs: Number of operations, by size group, 1997-2001 [1]**

| Year | Operations | | | | | | |
|---|---|---|---|---|---|---|---|
| | 1-99 | 100-499 | 500-999 | 1,000-1,999 | 2,000-4,999 | 5,000+ | Total |
| | *Number* | *Number* | *Number* | *Number* | *Number* | *Number* | *Number* |
| 1997 | 2,050 | 510 | 180 | 130 | 100 | 30 | 3,000 |
| 1998 | 1,900 | 500 | 100 | 150 | 120 | 30 | 2,800 |
| 1999 | 1,200 | 500 | 100 | 130 | 130 | 40 | 2,100 |
| 2000 | 1,700 | 390 | 110 | 140 | 120 | 40 | 2,500 |
| 2001 | 2,200 | 430 | 90 | 110 | 130 | 40 | 3,000 |

[1] An operation is any place having one or more head on hand at any time during the year.

**Hogs and pigs: Sows farrowing and pig crop, 1997-2002**

| Year | December-February [1] | | | March-May | | |
|---|---|---|---|---|---|---|
| | Sows farrowing | Pigs per litter | Pig crop | Sows farrowing | Pigs per litter | Pig crop |
| | *1,000 head* | *head* | *1,000 head* | *1,000 head* | *head* | *1,000 head* |
| 1998 | 40 | 8.8 | 352 | 53 | 8.9 | 472 |
| 1999 | 37 | 9.0 | 333 | 55 | 8.9 | 490 |
| 2000 | 44 | 8.8 | 387 | 50 | 9.0 | 450 |
| 2001 | 46 | 8.8 | 403 | 50 | 8.9 | 445 |
| 2002 | 50 | 9.0 | 450 | 50 | 8.9 | 443 |
| | June-August | | | September-November | | |
| 1997 | 54 | 8.7 | 470 | 48 | 8.7 | 418 |
| 1998 | 52 | 8.9 | 463 | 52 | 8.5 | 442 |
| 1999 | 51 | 9.0 | 459 | 49 | 9.0 | 441 |
| 2000 | 50 | 8.9 | 445 | 48 | 9.1 | 434 |
| 2001 | 52 | 9.1 | 473 | 46 | 9.2 | 421 |

[1] December of previous year.

## Hogs and pigs: Inventory, 1998-2002

| Month and year | Market hogs and pigs | | | | | Breeding stock | Total hogs and pigs |
|---|---|---|---|---|---|---|---|
| | Under 60 pounds | 60-119 pounds | 120-179 pounds | 180 lbs and over | Total market | | |
| | *1,000 head* | *1,000 head* | *1,000 head* | *1,000 head* | *1,000 head* | *1,000 head* | *1,000 head* |
| March 1 | | | | | | | |
| 1998 | 290 | 220 | 195 | 165 | 870 | 130 | 1,000 |
| 1999 | 280 | 225 | 190 | 185 | 880 | 110 | 990 |
| 2000 | 295 | 215 | 170 | 160 | 840 | 120 | 960 |
| 2001 | 310 | 185 | 160 | 125 | 780 | 120 | 900 |
| 2002 | 310 | 215 | 165 | 150 | 840 | 120 | 960 |
| June 1 | | | | | | | |
| 1998 | 450 | 220 | 190 | 140 | 1,000 | 130 | 1,130 |
| 1999 | 430 | 220 | 200 | 130 | 980 | 120 | 1,100 |
| 2000 | 390 | 200 | 160 | 130 | 880 | 110 | 990 |
| 2001 | 315 | 215 | 155 | 125 | 810 | 110 | 920 |
| 2002 | 310 | 195 | 155 | 140 | 800 | 110 | 910 |
| September 1 | | | | | | | |
| 1998 | 300 | 250 | 195 | 205 | 950 | 120 | 1,070 |
| 1999 | 310 | 260 | 190 | 160 | 920 | 110 | 1,030 |
| 2000 | 360 | 230 | 180 | 140 | 910 | 110 | 1,020 |
| 2001 | 330 | 225 | 175 | 130 | 860 | 110 | 970 |
| December 1 | | | | | | | |
| 1998 | 340 | 270 | 180 | 210 | 1,000 | 120 | 1,120 |
| 1999 | 330 | 205 | 170 | 155 | 860 | 120 | 980 |
| 2000 | 320 | 200 | 170 | 150 | 840 | 110 | 950 |
| 2001 | 315 | 205 | 170 | 160 | 850 | 110 | 960 |

## Hogs and pigs: Production and income, 1997-2001

| Year | Production [1] | Marketings [2] | Average price per cwt | Value of production | Cash receipts [3] | Value of home consumption | Gross income |
|---|---|---|---|---|---|---|---|
| | *1,000 pounds* | *1,000 pounds* | *Dollars* | *1,000 dollars* | *1,000 dollars* | *1,000 dollars* | *1,000 dollars* |
| 1997 | 396,899 | 401,325 | 53.10 | 207,562 | 213,722 | 1,495 | 215,217 |
| 1998 | 402,708 | 403,550 | 33.90 | 132,639 | 138,347 | 1,393 | 139,740 |
| 1999 | 466,637 | 494,787 | 29.80 | 136,678 | 149,937 | 1,229 | 151,166 |
| 2000 | 464,577 | 483,775 | 40.70 | 184,575 | 200,485 | 1,662 | 202,147 |
| 2001 | 488,320 | 496,775 | 41.70 | 199,602 | 211,337 | 1,695 | 213,032 |

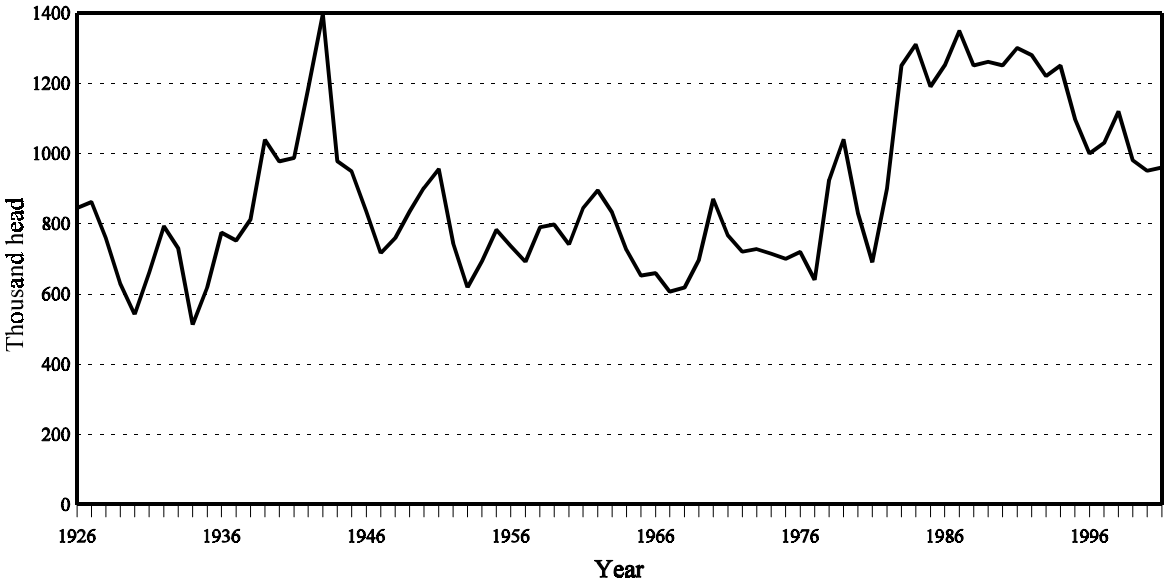
[1] Adjustments made for changes in inventory and for inshipments.
[2] Excludes custom slaughter for use on farms where produced and inter-farm sales within the state.
[3] Receipts from marketing and sales of farm slaughter. Includes allowance for higher average price of outshipments of feeder pigs.

## Hogs and pigs: Balance sheet, 1997-2001

| Year | Beginning inventory | Dec-Nov pig crop | Inshipments | Marketings [1] | Farm slaughter [2] | Deaths | Number on hand December 1 |
|---|---|---|---|---|---|---|---|
| | *1,000 head* | *1,000 head* | *1,000 head* | *1,000 head* | *1,000 head* | *1,000 head* | *1,000 head* |
| 1997 | 1,000 | 1,686 | 85 | 1,663 | 3 | 75 | 1,030 |
| 1998 | 1,030 | 1,729 | 125 | 1,683 | 6 | 75 | 1,120 |
| 1999 | 1,120 | 1,723 | 225 | 1,999 | 4 | 85 | 980 |
| 2000 | 980 | 1,716 | 275 | 1,937 | 4 | 80 | 950 |
| 2001 | 950 | 1,731 | 280 | 1,919 | 4 | 78 | 960 |

[1] Includes custom slaughter and state outshipments, but excludes sales within Michigan.
[2] Excludes custom slaughter for farmers at commercial establishments.

## December 1 Hog Inventory, 1926-2001




# Honey

Honey production in Michigan during 2001 totaled 4.56 million pounds, 16 percent less than a year ago. This estimate included honey from producers with 5 or more colonies. Michigan ranked 12th in honey production in 2001 compared to 9th in 2000. There were 76,000 colonies in production during 2001, up 4,000 colonies from 2000. Yield per colony averaged 60 pounds, down 15 pounds from 75 pounds in 2000.

Michigan honey prices averaged 78 cents per pound, up 18 cents from last year. Value of production totaled $3.56 million, up 10 percent from 2000. Honey stocks on hand for sale, as of December 15, totaled 2.83 million pounds, down 5 percent from 2000.

**Honey: Production and value, 1997-2001** [1]

| Year | Honey producing colonies | Yield per colony | Production | Price per pound | Value of production | Stocks Dec 15 [2] |
|---|---|---|---|---|---|---|
| | *Thousands* | *Pounds* | *1,000 pounds* | *Cents* | *1,000 dollars* | *1,000 pounds* |
| 1997 | 85 | 70 | 5,950 | 77 | 4,582 | 3,273 |
| 1998 | 80 | 85 | 6,800 | 66 | 4,488 | 3,672 |
| 1999 | 73 | 85 | 6,205 | 66 | 4,095 | 3,475 |
| 2000 | 72 | 75 | 5,400 | 60 | 3,240 | 2,970 |
| 2001 | 76 | 60 | 4,560 | 78 | 3,557 | 2,827 |

[1] Includes only producers with 5 or more colonies.
[2] Stocks held by producers.

# Dairy

Milk production in Michigan during 2001 was 5,855 million pounds, up 2.6 percent from 2000. Michigan ranked 7th nationally in milk production in 2001, accounting for 3.5 percent of U.S. production.

The annual average number of milk cows on Michigan farms during 2001 was 303,000 head, up 3,000 from the previous year. The number of operations with milk cows fell to 3,300 from 3,500 in 2000. Milk production per cow was 19,323 pounds in 2001, compared with 19,017 pounds during 2000. The average butterfat content was 3.63 percent compared with 3.66 percent in 2000.

Milk prices during the year averaged $15.20 per cwt, up $2.30 from the previous year. Cash receipts from milk sales totaled $882 million, up 12.1 percent from 2000. Milk continued as the top ranked Michigan commodity in cash receipts.

**Milk: Production, utilization, marketings, and value, 1997-2001**

| Item | Unit | 1997 | 1998 | 1999 | 2000 | 2001 |
|---|---|---|---|---|---|---|
| | | Production | | | | |
| **Production** | | | | | | |
| Total milk produced on farms | Million pounds | 5,410 | 5,365 | 5,455 | 5,705 | 5,855 |
| Milkfat produced | Million pounds | 197.5 | 194.7 | 201.3 | 208.8 | 212.5 |
| Milkfat | Percent | 3.65 | 3.63 | 3.69 | 3.66 | 3.63 |
| **Utilization** | | | | | | |
| Milk used where produced | | | | | | |
| Fed to calves | Million pounds | 41 | 40 | 37 | 45 | 50 |
| Used for milk, cream, and butter | Million pounds | 4 | 5 | 3 | 5 | 5 |
| Milk marketed by producers | Million pounds | 5,365 | 5,320 | 5,415 | 5,655 | 5,800 |
| Average return per 100 pounds of milk | Dollars | 13.60 | 15.30 | 14.80 | 12.90 | 15.20 |
| Average return per pound milkfat | Dollars | 3.74 | 4.21 | 4.01 | 3.52 | 4.19 |
| Fluid grade | Percent | 99 | 99 | 99 | 99 | 99 |
| Total cash receipts | 1,000 dollars | 732,135 | 813,960 | 801,420 | 729,495 | 881,600 |
| **Value** | | | | | | |
| Value of milk used where produced [1] | 1,000 dollars | 6,141 | 6,885 | 5,920 | 6,450 | 8,360 |
| Total value of milk produced | 1,000 dollars | 738,276 | 820,845 | 807,340 | 735,945 | 889,960 |

[1] Includes value of milk fed to calves and milk used by farm households.

**Milk cows: Number of operations, by size group, 1997-2001 [1]**

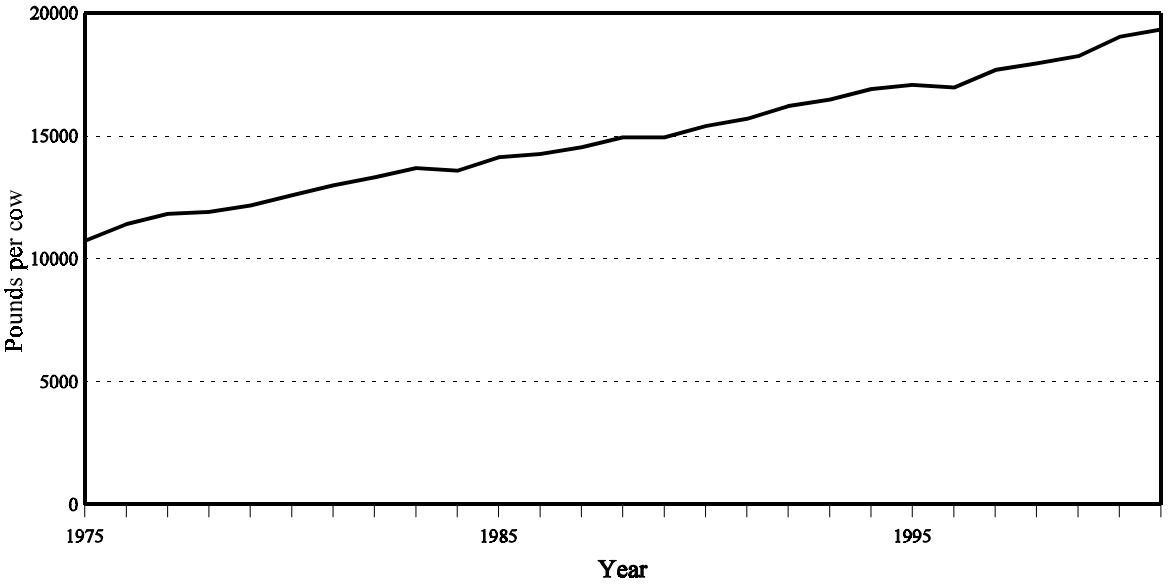
| Size group by head | 1997 | 1998 | 1999 | 2000 | 2001 |
|---|---|---|---|---|---|
| | *Number of operations* | *Number of operations* | *Number of operations* | *Number of operations* | *Number of operations* |
| 1-29 | 1,100 | 950 | 1,000 | 1,000 | 1,050 |
| 30-49 | 900 | 900 | 700 | 630 | 550 |
| 50-99 | 1,100 | 1,100 | 1,000 | 900 | 800 |
| 100-199 | 850 | 810 | 750 | 700 | 620 |
| 200-499 | 215 | 205 | 200 | 215 | 215 |
| 500+ | 35 | 35 | 50 | 55 | 65 |
| Total | 4,200 | 4,000 | 3,700 | 3,500 | 3,300 |

[1] An operation is any place having one or more milk cows on hand at any time during the year.

**Milk cows: Number by month, 1997-2001**

| Month | 1997 | 1998 | 1999 | 2000 | 2001 |
|---|---|---|---|---|---|
| | *1,000 head* | *1,000 head* | *1,000 head* | *1,000 head* | *1,000 head* |
| January | 311 | 297 | 291 | 298 | 303 |
| February | 310 | 296 | 292 | 296 | 303 |
| March | 306 | 297 | 296 | 296 | 304 |
| April | 306 | 298 | 298 | 299 | 304 |
| May | 308 | 299 | 303 | 301 | 304 |
| June | 310 | 301 | 304 | 304 | 305 |
| July | 309 | 305 | 306 | 302 | 303 |
| August | 308 | 302 | 302 | 302 | 303 |
| September | 304 | 299 | 299 | 300 | 303 |
| October | 303 | 297 | 299 | 302 | 302 |
| November | 301 | 297 | 298 | 299 | 301 |
| December | 301 | 299 | 297 | 300 | 298 |
| Annual | 306 | 299 | 299 | 300 | 303 |

## Annual Milk per Cow 1974-2001




**Milk production: Total by month, 1997-2001**

| Month | 1997 | 1998 | 1999 | 2000 | 2001 |
|---|---|---|---|---|---|
| | *Million pounds* | *Million pounds* | *Million pounds* | *Million pounds* | *Million pounds* |
| January | 460 | 441 | 442 | 474 | 482 |
| February | 425 | 406 | 410 | 447 | 447 |
| March | 465 | 454 | 463 | 485 | 505 |
| April | 454 | 446 | 454 | 481 | 492 |
| May | 474 | 468 | 486 | 494 | 517 |
| June | 462 | 456 | 465 | 485 | 505 |
| July | 460 | 471 | 474 | 489 | 498 |
| August | 462 | 459 | 462 | 485 | 489 |
| September | 435 | 438 | 444 | 455 | 476 |
| October | 444 | 441 | 454 | 477 | 483 |
| November | 426 | 431 | 441 | 457 | 474 |
| December | 443 | 454 | 460 | 476 | 487 |
| Annual | 5,410 | 5,365 | 5,455 | 5,705 | 5,855 |

**Milk: Production per cow, by month, 1997-2001**

| Month | 1997 | 1998 | 1999 | 2000 | 2001 |
|---|---|---|---|---|---|
| | *Pounds* | *Pounds* | *Pounds* | *Pounds* | *Pounds* |
| January | 1,480 | 1,485 | 1,520 | 1,590 | 1,590 |
| February | 1,370 | 1,370 | 1,405 | 1,510 | 1,475 |
| March | 1,520 | 1,530 | 1,565 | 1,640 | 1,660 |
| April | 1,485 | 1,495 | 1,525 | 1,610 | 1,620 |
| May | 1,540 | 1,565 | 1,605 | 1,640 | 1,700 |
| June | 1,490 | 1,515 | 1,530 | 1,595 | 1,655 |
| July | 1,490 | 1,545 | 1,550 | 1,620 | 1,645 |
| August | 1,500 | 1,520 | 1,530 | 1,605 | 1,615 |
| September | 1,430 | 1,465 | 1,485 | 1,515 | 1,570 |
| October | 1,465 | 1,485 | 1,520 | 1,580 | 1,600 |
| November | 1,415 | 1,450 | 1,480 | 1,530 | 1,575 |
| December | 1,473 | 1,520 | 1,550 | 1,585 | 1,635 |
| Annual | 17,680 | 17,943 | 18,244 | 19,017 | 19,323 |

**Dairy products: Annual production totals, 1997-2001**

| Product | 1997 | 1998 | 1999 | 2000 | 2001 |
|---|---|---|---|---|---|
| | *1,000 gallons* | *1,000 gallons* | *1,000 gallons* | *1,000 gallons* | *1,000 gallons* |
| **Michigan** | | | | | |
| Ice cream, fullfat, total | 27,973 | 24,198 | 19,572 | 22,781 | 22,494 |
| Ice cream, lowfat, total | 19,131 | 18,583 | 17,812 | 16,079 | |
| Sherbet, total | 1,800 | 2,016 | 1,369 | 1,696 | |
| Ice cream mix, fullfat | 13,757 | 12,161 | 10,317 | 11,678 | 11,599 |
| Ice cream mix, lowfat | 8,040 | 8,729 | 8,117 | 8,220 | 8,263 |
| Sherbet mix | 1,025 | 1,019 | 722 | 1,010 | |
| | *Million pounds* | *Million pounds* | *Million pounds* | *Million pounds* | *Million pounds* |
| **East North Central Region** [1] | | | | | |
| Cheese, total | 2,469.6 | 2,484.4 | 2,538.5 | 2,606.4 | 2,545.1 |
| Cheese, American type [2] | 993.6 | 982.9 | 989.0 | 952.2 | 876.3 |
| Cheese, Italian | 1,008.7 | 1,025.4 | 1,031.9 | 1,101.1 | 1,123.7 |
| Cottage cheese, curd | 109,125 | 115,604 | 110,954 | 112,892 | 111,863 |
| Cottage cheese, creamed | 112,389 | 110,229 | 96,311 | 102,329 | 102,140 |
| Cottage cheese, low fat | 72,668 | 78,354 | 74,009 | 77,612 | 81,190 |
| Condensed skim milk, unsweetened, bulk | 128.0 | 119.2 | 146.6 | 161.1 | 122.6 |
| Dried milk, nonfat for human food | 71.4 | 57.0 | 58.4 | 57.2 | 48.5 |
| Butter | 383.2 | 373.3 | 349.8 | 327.2 | 368.2 |
| Water & juice ices | 7,649 | 8,136 | 7,521 | 8,098 | 8,769 |
| Yogurt, plain and flavored | 550.5 | 592.9 | 624.3 | 720.7 | 818.9 |

[1] Illinois, Indiana, Michigan, Ohio, and Wisconsin.
[2] Cheddar, Colby, washed curd, stirred curd, Monterey, and Jack.

**Dairy products: Ice cream, fullfat, total, by month, 1997-2001**

| Month | 1997 | 1998 | 1999 | 2000 | 2001 |
|---|---|---|---|---|---|
| | *1,000 gallons* | *1,000 gallons* | *1,000 gallons* | *1,000 gallons* | *1,000 gallons* |
| January | 1,905 | 1,644 | 1,010 | 1,744 | 1,472 |
| February | 1,944 | 1,765 | 1,317 | 1,724 | 1,543 |
| March | 2,290 | 2,007 | 1,652 | 1,967 | 1,752 |
| April | 2,448 | 2,271 | 1,933 | 1,907 | 2,352 |
| May | 2,814 | 2,319 | 1,791 | 1,771 | 2,072 |
| June | 2,743 | 2,807 | 2,283 | 1,945 | 2,071 |
| July | 2,734 | 2,643 | 2,194 | 1,999 | 2,397 |
| August | 2,611 | 2,502 | 2,164 | 2,084 | 2,270 |
| September | 2,413 | 2,159 | 1,626 | 1,793 | 1,977 |
| October | 2,116 | 1,591 | 1,314 | 1,791 | 1,840 |
| November | 2,125 | 1,168 | 990 | 1,637 | 1,318 |
| December | 1,830 | 1,322 | 1,298 | 1,246 | 1,430 |
| Total | 27,973 | 24,198 | 19,572 | [1] 22,781 | 22,494 |

[1] Revised; monthly data are not revised and do not add to the total.

# Mink

**Mink: Farms, pelts produced and females bred to produce kits, 1998-2002**

| Year | 1998 | 1999 | 2000 | 2001 | 2002 |
|---|---|---|---|---|---|
| | *Number* | *Number* | *Number* | *Number* | *Number* |
| Farms | 13 | 12 | 12 | 11 | ([1]) |
| Pelts produced | 46,000 | 51,000 | 42,500 | 54,000 | ([1]) |
| Females bred to produce kits | 15,500 | 15,500 | 11,000 | 11,800 | 12,700 |

[1] Published in July 2003.

# Sheep and Lambs

Michigan sheep operations in 2001 numbered 1,800, unchanged from 2000. All sheep and lamb inventory in Michigan on January 1, 2001 was estimated at 72,000 head, up 1 percent from a year ago. The breeding sheep inventory, at 52,000 head, was up 2 percent from the previous year. Market sheep and lambs totaled 20,000 head, unchanged from a year earlier. The 2001 Michigan lamb crop (lambs born October 1, 1999 through September 30, 2001) was 50,000 head, up 9 percent from the previous year.

Sheep and lamb value of production was $2.8 million, up 7 percent from 2000. Cash receipts totaled $2.4 million for 2001. All sheep and lambs were valued at $110 per head, down $20 from the previous year.

Sheep shorn in 2001 totaled 77,000 head. The weight per fleece was 6.2 pounds, compared with 6.4 pounds in 2000. Total wool production in Michigan was 480,000 pounds. Wool production was valued at $58,0000. The average price per pound at $0.12., was down $0.02.

**Sheep and lambs: Number on farms by class, January 1, 1998-2002**

| Class | 1998 | 1999 | 2000 | 2001 | 2002 |
|---|---|---|---|---|---|
| | *1,000 Head* | *1,000 Head* | *1,000 Head* | *1,000 Head* | *1,000 Head* |
| Breeding sheep 1 year and older | | | | | |
| Ewes | 38 | 34 | 38 | 40 | 40 |
| Rams | 3 | 3 | 3 | 2 | 2 |
| Replacement lambs | 7 | 7 | 10 | 9 | 10 |
| Total market sheep and lambs | 24 | 18 | 17 | 20 | 20 |
| All sheep and lambs | 72 | 62 | 68 | 71 | 72 |

**Sheep and lambs: Number of operations, 1997-2001 [1]**

| Year | Number |
|---|---|
| 1997 | 1,600 |
| 1998 | 1,600 |
| 1999 | 1,700 |
| 2000 | 1,800 |
| 2001 | 1,800 |

[1] An operation is any place having one or more head on hand at any one time during the year.

**Sheep and lambs: Lamb crop, 1997-2001**

| Year | Breeding ewes [1] | Lambs per 100 ewes [1] | Lamb crop |
|---|---|---|---|
| | *1,000 Head* | *Number* | *1,000 Head* |
| 1997 | 50 | 124 | 62 |
| 1998 | 38 | 121 | 46 |
| 1999 | 34 | 132 | 45 |
| 2000 | 38 | 121 | 46 |
| 2001 | 40 | 125 | 50 |

[1] Ewes 1 year and older January 1.

**Sheep and lambs: Balance sheet, 1997-2001**

| Year | All sheep and lambs on hand January 1 | Lamb crop | Inshipments | Marketings [1] | | Farm slaughter [2] | Deaths | | All sheep and lambs on hand following January 1 |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Sheep | Lambs | | Sheep | Lambs | |
| | *1,000 Head* | *1,000 Head* | *1,000 Head* | *1,000 Head* | *1,000 Head* | *1,000 Head* | *1,000 Head* | *1,000 Head* | *1,000 Head* |
| 1997 | 85 | 62 | 13.0 | 24.0 | 49.0 | 2.0 | 2.0 | 11.0 | 72 |
| 1998 | 72 | 46 | 8.0 | 16.0 | 36.0 | 2.0 | 1.0 | 9.0 | 62 |
| 1999 | 62 | 45 | 5.0 | 4.0 | 28.5 | 2.0 | 2.5 | 7.0 | 68 |
| 2000 | 68 | 46 | 2.0 | 7.5 | 26.5 | 2.0 | 3.0 | 6.0 | 71 |
| 2001 | 71 | 50 | 1.5 | 6.5 | 31.5 | 2.0 | 3.5 | 7.0 | 72 |

[1] Includes custom slaughter and state outshipments, but excludes sales within Michigan.
[2] Excludes custom slaughter for farmers at commercial establishments.

**Sheep and lambs: Production and income, 1997-2001**

| Year | Production [1] | Marketings [2] | Average price per cwt | | Value of production | Cash receipts [3] | Value of home consumption | Gross income |
|---|---|---|---|---|---|---|---|---|
| | | | Sheep | Lambs | | | | |
| | *1,000 pounds* | *1,000 pounds* | *Dollars* | *Dollars* | *1,000 dollars* | *1,000 dollars* | *1,000 dollars* | *1,000 dollars* |
| 1997 | 6,140 | 8,530 | 35.00 | 84.00 | 4,834 | 5,578 | 483 | 6,061 |
| 1998 | 4,270 | 5,715 | 32.00 | 69.00 | 2,710 | 3,233 | 397 | 3,630 |
| 1999 | 3,982 | 3,225 | 30.00 | 69.00 | 2,579 | 2,111 | 397 | 2,508 |
| 2000 | 3,848 | 3,250 | 31.00 | 75.00 | 2,654 | 2,197 | 431 | 2,628 |
| 2001 | 4,245 | 3,752 | 31.00 | 70.00 | 2,833 | 2,441 | 403 | 2,844 |

[1] Adjustments made for changes in inventory and for inshipments.
[2] Excludes custom slaughter for use on farms where produced and inter-farm sales within the state.
[3] Receipts from marketings and sale of farm slaughter.

**Sheep and lambs: Wool production and value, 1997-2001**

| Year | Sheep shorn | Weight per fleece | Production | Price per pound | Value of production [1] |
|---|---|---|---|---|---|
| | *1,000 Head* | *Pounds* | *1,000 Pounds* | *Cents* | *1,000 Dollars* |
| 1997 | 62 | 7.3 | 450 | 44 | 198 |
| 1998 | 58 | 7.4 | 430 | 31 | 133 |
| 1999 | 66 | 7.0 | 465 | 14 | 65 |
| 2000 | 72 | 6.4 | 460 | 14 | 64 |
| 2001 | 77 | 6.2 | 480 | 12 | 58 |

[1] Production multiplied by marketing year average price.

# Trout

Michigan's 33 commercial trout operations sold 376,000 pounds of trout in 2001. This was a decrease of 21 percent from last season. Sales were valued at $823,000 and included sales of foodsize trout (12 inches or longer), stockers (6 to 12 inches), fingerlings (2 to 6 inches) and eggs.

Foodsize trout had sales of 330,000 pounds with an average liveweight of 1.2 pounds per fish. Foodsize sales totaled $660,000 for an average value of $2.00 per pound. The major sales outlets were fee fishing at 35 percent of total, 25 percent to processors, and 20 percent direct to consumers. Stocker trout sales totaled 42,000 pounds with an average liveweight of 0.4 pounds per trout. The value of sales, at $116,000, decreased from $207,000 and averaged $2.75 per pound. Direct to consumers at 33 percent accounted for the majority of sales followed by sales to other producers at 27 percent and fee fishing at 23 percent. Number of fingerlings sold was 170,000, down 32 percent from last year. The value of sales decreased to $47,000 and averaged $275.00 per 1,000 fish.

Losses of trout in Michigan amounted to 160,000 fish, weighing 80,000 pounds. Predators accounted for 60 percent of all fish lost.

**Trout: Sales by size category, 1997-2001**

| Size category | Number of fish | Live weight | Sales | |
|---|---|---|---|---|
| | | | Total | Average per pound [1] |
| | *1,000* | *1,000* | *1,000 dollars* | *Dollars* |
| Foodsize (12 inches long or more): | | | | |
| 1997 | 550 | 540 | 1,255 | 2.32 |
| 1998 | 340 | 350 | 777 | 2.22 |
| 1999 | 320 | 352 | 859 | 2.44 |
| 2000 | 330 | 388 | 776 | 2.00 |
| 2001 | 275 | 330 | 660 | 2.00 |
| Stockers (6-12 inches long): | | | | |
| 1997 | 220 | 75 | 160 | 2.13 |
| 1998 | 320 | 109 | 302 | 2.77 |
| 1999 | 200 | 65 | 174 | 2.67 |
| 2000 | 210 | 78 | 207 | 2.65 |
| 2001 | 110 | 42 | 116 | 2.75 |
| Fingerlings (2-6 inches long): | | | | |
| 1997 | 485 | 13 | 70 | 5.38 |
| 1998 | 320 | 17 | 72 | 226.00 |
| 1999 | 310 | 10 | 80 | 259.00 |
| 2000 | 250 | 8 | 54 | 215.00 |
| 2001 | 170 | 4 | 47 | 275.00 |

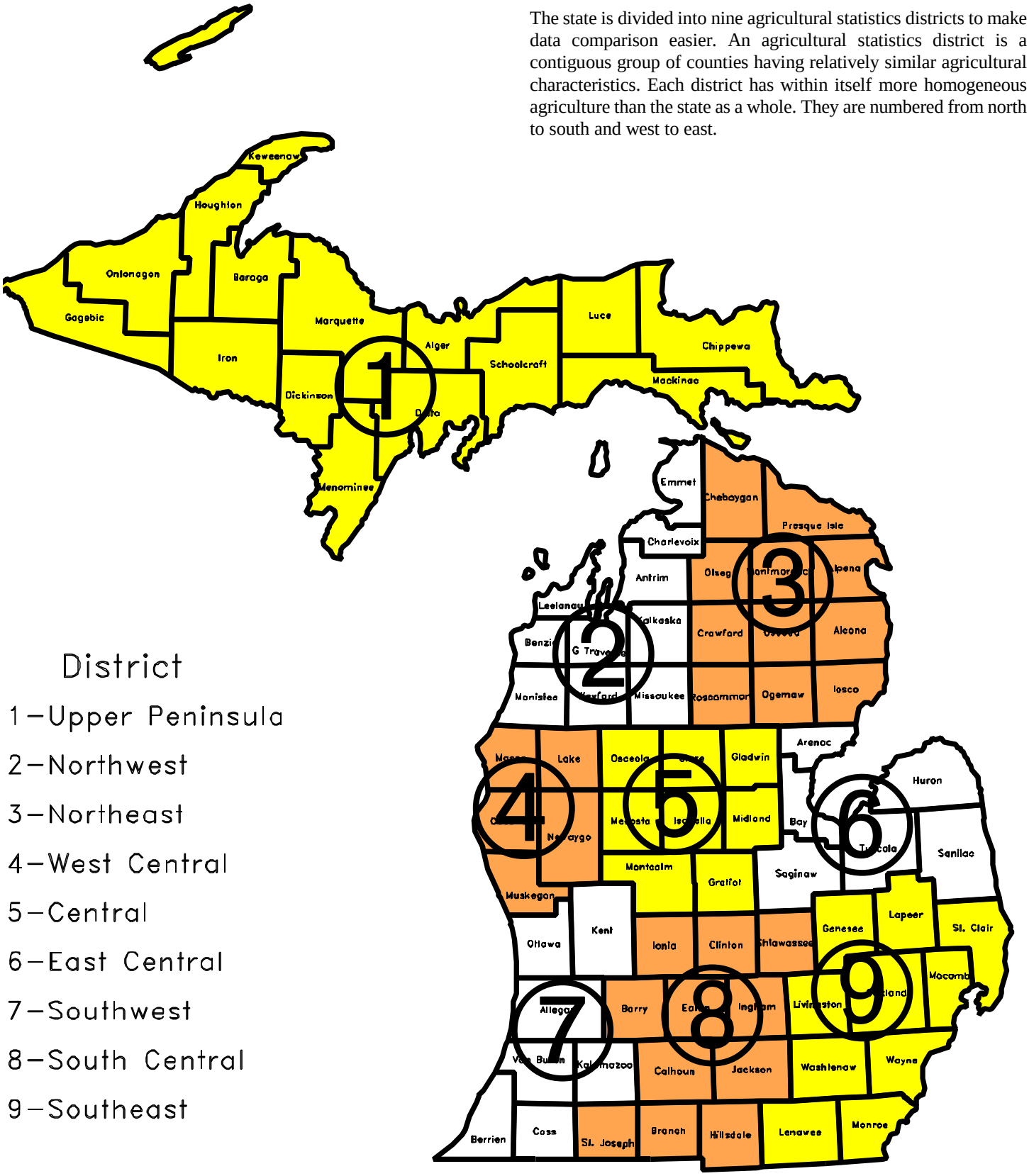
[1] Average per thousand fish for fingerlings after 1997.

**Trout: Number of operations, 1998-2002**

| Year | Operations |
|---|---|
| | *Number* |
| 1998 | 42 |
| 1999 | 39 |
| 2000 | 30 |
| 2001 | 33 |
| 2002 | 33 |

# Agricultural Statistics Districts

The state is divided into nine agricultural statistics districts to make data comparison easier. An agricultural statistics district is a contiguous group of counties having relatively similar agricultural characteristics. Each district has within itself more homogeneous agriculture than the state as a whole. They are numbered from north to south and west to east.




District

1—Upper Peninsula

2—Northwest

3—Northeast

4—West Central

5—Central

6—East Central

7—Southwest

8—South Central

9—Southeast

**Principal counties for field crops, 2001** [1]

| Rank | Corn | Dry beans | Hay | Oats | Soybeans | Sugarbeets | Wheat |
|---|---|---|---|---|---|---|---|
| 1 | Lenawee | Huron | Sanilac | Sanilac | Lenawee | Huron | Sanilac |
| 2 | St. Joseph | Gratiot | Isabella | Alpena | Sanilac | Tuscola | Huron |
| 3 | Branch | Tuscola | Huron | Tuscola | Branch | Saginaw | Lenawee |
| 4 | Allegan | Montcalm | Kent | Lapeer, Shiawassee | Gratiot | Sanilac | Monroe |
| 5 | Gratiot | Bay | Osceola | | Shiawassee | Gratiot | Shiawassee |

[1] Based on total production.

**Principal counties for livestock, 2001** [1]

| Rank | Cattle & Calves | Hogs | Milk cows | Sheep |
|---|---|---|---|---|
| 1 | Huron | Cass, Allegan | Sanilac | Washtenaw |
| 2 | Sanilac | | Clinton | Jackson |
| 3 | Clinton | Ottawa | Allegan | Kalamazoo |
| 4 | Allegan | Branch | Huron | Eaton |
| 5 | Ionia | Calhoun | Ottawa | St. Joseph |

[1] Based on number of head

**Principal counties for fruit and vegetables, 2001** [1]

| Rank | Apples | Blueberries | Grapes | Tart Cherries | Asparagus | Cucumbers | Snap Beans |
|---|---|---|---|---|---|---|---|
| 1 | Kent | Van Buren | Berrien | Leelanau | Oceana | Van Buren | St Joseph |
| 2 | Berrien | Ottawa | Van Buren | Oceana | Mason | Muskegon | Montcalm |
| 3 | Van Buren | Allegan | Cass | Grand Traverse | Van Buren | St Joseph | Mason |
| 4 | Ottawa | Berrien | Kalamazoo | Antrim | Manistee | Cass | Oceana |
| 5 | Oceana | Muskegon | Leelanau | Berrien | Berrien | Lenawee | Kalamazoo |

[1] Based on acres from rotational surveys

**Barley: Acreage, yield, and production, by county, 2000-2001 [1]**

| County and district | 2000 | | | | 2001 | | | |
|---|---|---|---|---|---|---|---|---|
| | Planted | Harvested | Yield | Production | Planted | Harvested | Yield | Production |
| | *Acres* | *Acres* | *Bushels* | *1,000 Bu* | *Acres* | *Acres* | *Bushels* | *1,000 Bu* |
| Alger | 500 | 500 | 52 | 26 | | | | |
| Delta | 1,600 | 1,600 | 65 | 104 | 1,600 | 1,400 | 54 | 75 |
| Menominee | 3,500 | 3,400 | 59 | 200 | 3,000 | 2,800 | 52 | 146 |
| Other counties [2] | 1,800 | 1,800 | 53 | 95 | 3,400 | 2,600 | 65 | 169 |
| **Upper Peninsula** | 7,400 | 7,300 | 58 | 425 | 8,000 | 6,800 | 57 | 390 |
| **Northwest** | 900 | 900 | 67 | 60 | | | | |
| Alpena | 500 | 500 | 80 | 40 | 800 | 750 | 44 | 33 |
| Iosco | | | | | 700 | 500 | 64 | 32 |
| Montmorency | 850 | 850 | 61 | 52 | 600 | 500 | 46 | 23 |
| Ogemaw | | | | | 550 | 550 | 60 | 33 |
| Other counties [2] | 2,950 | 2,950 | 65 | 193 | 1,550 | 1,300 | 60 | 78 |
| **Northeast** | 4,300 | 4,300 | 66 | 285 | 4,200 | 3,600 | 55 | 199 |
| Isabella | | | | | 750 | 750 | 32 | 24 |
| Other counties [2] | | | | | 1,050 | 950 | 44 | 42 |
| **Central** | 1,600 | 1,400 | 52 | 73 | 1,800 | 1,700 | 39 | 66 |
| Huron | | | | | 900 | 500 | 92 | 46 |
| Sanilac | | | | | 900 | 900 | 58 | 52 |
| Other counties [2] | | | | | 900 | 800 | 73 | 58 |
| **East Central** | 3,000 | 2,300 | 61 | 140 | 2,700 | 2,200 | 71 | 156 |
| **Southwest** | | | | | 1,000 | 900 | 32 | 29 |
| **South Central** | 1,500 | 1,500 | 60 | 90 | 1,200 | 900 | 62 | 56 |
| **Southeast** | 800 | 800 | 50 | 40 | 1,000 | 900 | 58 | 52 |
| **Other districts [2]** | 500 | 500 | 54 | 27 | 1,100 | 1,000 | 60 | 60 |
| **Michigan** | 20,000 | 19,000 | 60 | 1,140 | 21,000 | 18,000 | 56 | 1,008 |

[1] Estimates not published for counties with less than 500 acres.
[2] Estimates not published separately because of insufficient data or to avoid disclosure of individual operations.

## Corn: Acreage, yield, and production, by county, 2000 [1]

| County and district | Planted for all purposes | Grain | | | Silage | | |
|---|---|---|---|---|---|---|---|
| | | Harvested | Yield | Production | Harvested | Yield | Production |
| | *Acres* | *Acres* | *Bushels* | *1,000 Bu* | *Acres* | *Tons* | *Tons* |
| **Upper Peninsula** | 19,000 | 8,400 | 105 | 880 | 10,500 | 10.0 | 105,000 |
| Grand Traverse | 7,400 | 5,800 | 86 | 500 | 1,500 | 11.4 | 17,100 |
| Manistee | 1,800 | 1,250 | 80 | 100 | | | |
| Missaukee | 14,500 | 7,300 | 121 | 880 | | | |
| Other counties [2] | 19,300 | 13,350 | 88 | 1,180 | 13,500 | 10.6 | 142,900 |
| **Northwest** | 43,000 | 27,700 | 96 | 2,660 | 15,000 | 10.7 | 160,000 |
| Alpena | 6,000 | 4,800 | 97 | 465 | 1,150 | 13.0 | 15,000 |
| Montmorency | 2,300 | 1,900 | 113 | 215 | | | |
| Ogemaw | 9,000 | 5,500 | 118 | 650 | 3,400 | 13.3 | 45,300 |
| Other counties [2] | 17,700 | 12,100 | 105 | 1,270 | 5,950 | 10.9 | 64,700 |
| **Northeast** | 35,000 | 24,300 | 107 | 2,600 | 10,500 | 11.9 | 125,000 |
| Mason | 10,300 | 7,800 | 89 | 695 | 2,350 | 10.7 | 25,100 |
| Muskegon | 17,200 | 13,400 | 88 | 1,180 | 3,700 | 9.1 | 33,800 |
| Newaygo | 24,200 | 17,100 | 110 | 1,880 | 7,000 | 11.2 | 78,500 |
| Other counties [2] | 11,300 | 8,300 | 85 | 705 | 2,950 | 7.7 | 22,600 |
| **West Central** | 63,000 | 46,600 | 96 | 4,460 | 16,000 | 10.0 | 160,000 |
| Gratiot | 81,000 | 73,000 | 127 | 9,240 | 7,100 | 18.3 | 130,000 |
| Isabella | 39,000 | 31,200 | 115 | 3,600 | 7,600 | 13.0 | 98,500 |
| Mecosta | 17,500 | 14,100 | 110 | 1,550 | 3,300 | 13.3 | 43,800 |
| Midland | 22,000 | 21,400 | 130 | 2,780 | | | |
| Montcalm | 52,000 | 45,000 | 109 | 4,890 | 6,400 | 16.4 | 105,000 |
| Osceola | 7,500 | 3,200 | 103 | 330 | 4,300 | 12.3 | 52,800 |
| Other counties [2] | 11,000 | 8,100 | 81 | 660 | 3,300 | 12.1 | 39,900 |
| **Central** | 230,000 | 196,000 | 118 | 23,050 | 32,000 | 14.7 | 470,000 |
| Arenac | 18,000 | 15,600 | 129 | 2,010 | | | |
| Bay | 43,000 | 41,200 | 137 | 5,630 | | | |
| Huron | 123,000 | 102,000 | 132 | 13,470 | 20,400 | 14.7 | 300,000 |
| Saginaw | 83,000 | 79,100 | 129 | 10,180 | | | |
| Sanilac | 93,000 | 77,500 | 132 | 10,210 | 15,000 | 14.4 | 216,000 |
| Tuscola | 80,000 | 75,600 | 134 | 10,100 | 3,800 | 13.6 | 51,700 |
| Other counties [2] | | | | | 6,800 | 15.0 | 102,300 |
| **East Central** | 440,000 | 391,000 | 132 | 51,600 | 46,000 | 14.6 | 670,000 |

See footnote(s) at end of table.

--continued

**Corn: Acreage, yield, and production, by county, 2000 [1] (continued)**

| County and district | Planted for all purposes | Grain | | | Silage | | |
|---|---|---|---|---|---|---|---|
| | | Harvested | Yield | Production | Harvested | Yield | Production |
| | *Acres* | *Acres* | *Bushels* | *1,000 Bu* | *Acres* | *Tons* | *Tons* |
| Allegan | 74,000 | 65,900 | 119 | 7,830 | 7,300 | 15.5 | 113,000 |
| Berrien | 45,000 | 43,900 | 126 | 5,550 | | | |
| Cass | 68,000 | 66,100 | 118 | 7,830 | | | |
| Kalamazoo | 53,000 | 49,400 | 110 | 5,440 | 2,800 | 13.7 | 38,300 |
| Kent | 40,000 | 31,400 | 116 | 3,650 | 8,300 | 19.8 | 164,000 |
| Ottawa | 39,000 | 30,700 | 106 | 3,260 | 8,000 | 15.3 | 122,000 |
| Van Buren | 31,000 | 29,600 | 128 | 3,790 | | | |
| Other counties [2] | | | | | 2,600 | 10.7 | 27,700 |
| **Southwest** | 350,000 | 317,000 | 118 | 37,350 | 29,000 | 16.0 | 465,000 |
| Barry | 38,000 | 31,200 | 125 | 3,910 | 6,700 | 15.1 | 101,000 |
| Branch | 83,000 | 80,200 | 126 | 10,120 | | | |
| Calhoun | 71,000 | 66,300 | 114 | 7,580 | 4,000 | 13.7 | 54,700 |
| Clinton | 68,000 | 50,600 | 128 | 6,490 | 17,000 | 16.5 | 281,000 |
| Eaton | 59,000 | 57,000 | 134 | 7,630 | 1,250 | 15.8 | 19,800 |
| Hillsdale | 67,000 | 62,100 | 113 | 6,990 | 4,200 | 14.2 | 59,800 |
| Ingham | 49,000 | 45,800 | 137 | 6,290 | 2,600 | 13.6 | 35,300 |
| Ionia | 69,000 | 61,200 | 133 | 8,150 | 7,200 | 15.6 | 112,000 |
| Jackson | 53,000 | 48,800 | 115 | 5,590 | 3,600 | 13.7 | 49,400 |
| St Joseph | 85,000 | 82,900 | 141 | 11,700 | | | |
| Shiawassee | 48,000 | 44,900 | 121 | 5,450 | 2,600 | 12.8 | 33,300 |
| Other counties [2] | | | | | 2,850 | 15.3 | 43,700 |
| **South Central** | 690,000 | 631,000 | 127 | 79,900 | 52,000 | 15.2 | 790,000 |
| Genesee | 30,000 | 28,600 | 112 | 3,210 | | | |
| Lapeer | 41,000 | 37,100 | 129 | 4,800 | 3,600 | 13.3 | 47,900 |
| Lenawee | 95,000 | 87,400 | 134 | 11,690 | 7,000 | 15.1 | 106,000 |
| Livingston | 24,000 | 22,200 | 116 | 2,580 | | | |
| Macomb | 9,000 | 8,100 | 110 | 890 | | | |
| Monroe | 57,000 | 55,500 | 145 | 8,020 | 850 | 18.8 | 16,000 |
| St Clair | 25,000 | 23,700 | 111 | 2,630 | 1,050 | 11.0 | 11,600 |
| Washtenaw | 42,000 | 38,700 | 124 | 4,800 | 2,900 | 16.2 | 46,900 |
| Other counties [2] | 7,000 | 6,700 | 101 | 680 | 3,600 | 12.9 | 46,600 |
| **Southeast** | 330,000 | 308,000 | 128 | 39,300 | 19,000 | 14.5 | 275,000 |
| **Michigan** | 2,200,000 | 1,950,000 | 124 | 241,800 | 230,000 | 14.0 | 3,220,000 |

[1] Estimates not published for counties with less than 500 acres.
[2] Estimates not published separately because of insufficient data or to avoid disclosure of individual operations.

**Corn: Acreage, yield, and production, by county, 2001 [1]**

| County and district | Planted for all purposes | Grain | | | Silage | | |
|---|---|---|---|---|---|---|---|
| | | Harvested | Yield | Production | Harvested | Yield | Production |
| | *Acres* | *Acres* | *Bushels* | *1,000 Bu* | *Acres* | *Tons* | *Tons* |
| Delta | 3,400 | | | | 2,100 | 8.6 | 18,000 |
| Menominee | 13,400 | 2,700 | 85 | 230 | 10,500 | 9.3 | 98,000 |
| Other counties [2] | 3,200 | 1,800 | 78 | 140 | 2,400 | 10.0 | 24,000 |
| **Upper Peninsula** | 20,000 | 4,500 | 82 | 370 | 15,000 | 9.3 | 140,000 |
| Antrim | 4,000 | 2,800 | 89 | 250 | | | |
| Emmet | 1,900 | 900 | 84 | 76 | 1,000 | 11.0 | 11,000 |
| Grand Traverse | 7,000 | 5,300 | 45 | 238 | 1,600 | 8.8 | 14,000 |
| Leelanau | 3,500 | 2,600 | 33 | 87 | | | |
| Missaukee | 15,000 | 6,100 | 91 | 555 | 8,800 | 10.3 | 91,000 |
| Wexford | 3,300 | 2,100 | 85 | 178 | | | |
| Other counties [2] | 7,300 | 4,700 | 46 | 216 | 5,600 | 9.6 | 54,000 |
| **Northwest** | 42,000 | 24,500 | 65 | 1,600 | 17,000 | 10.0 | 170,000 |
| Alpena | 5,700 | 4,400 | 48 | 210 | | | |
| Iosco | 7,300 | 4,300 | 81 | 350 | 2,800 | 9.6 | 27,000 |
| Montmorency | 2,000 | 1,450 | 59 | 85 | | | |
| Ogemaw | 8,400 | 3,800 | 79 | 300 | 4,400 | 10.2 | 45,000 |
| Otsego | 1,100 | 650 | 108 | 70 | | | |
| Presque Isle | 5,000 | 4,100 | 98 | 402 | | | |
| Other counties [2] | 3,500 | 1,300 | 64 | 83 | 4,800 | 7.9 | 38,000 |
| **Northeast** | 33,000 | 20,000 | 75 | 1,500 | 12,000 | 9.2 | 110,000 |
| Mason | 10,500 | 7,500 | 64 | 480 | 2,900 | 8.6 | 25,000 |
| Muskegon | 18,000 | 12,000 | 77 | 925 | 5,700 | 8.9 | 51,000 |
| Newaygo | 27,000 | 17,000 | 75 | 1,280 | 9,500 | 10.5 | 100,000 |
| Other counties [2] | 9,500 | 6,500 | 45 | 295 | 2,900 | 8.3 | 24,000 |
| **West Central** | 65,000 | 43,000 | 69 | 2,980 | 21,000 | 9.5 | 200,000 |
| Gladwin | 6,000 | 4,900 | 98 | 480 | | | |
| Gratiot | 83,000 | 75,300 | 111 | 8,370 | 7,100 | 15.5 | 110,000 |
| Isabella | 37,500 | 29,700 | 85 | 2,520 | 7,600 | 7.4 | 56,000 |
| Mecosta | 16,800 | 12,700 | 100 | 1,270 | 4,000 | 9.5 | 38,000 |
| Midland | 20,000 | 19,200 | 110 | 2,110 | | | |
| Montcalm | 51,000 | 42,800 | 99 | 4,250 | 7,700 | 13.5 | 104,000 |
| Osceola | | | | | 4,700 | 10.2 | 48,000 |
| Other counties [2] | 10,700 | 3,400 | 59 | 200 | 3,900 | 6.2 | 24,000 |
| **Central** | 225,000 | 188,000 | 102 | 19,200 | 35,000 | 10.9 | 380,000 |
| Arenac | 16,000 | 13,700 | 71 | 970 | | | |
| Bay | 44,000 | 41,900 | 84 | 3,500 | | | |
| Huron | 116,000 | 82,900 | 85 | 7,070 | 32,500 | 13.4 | 435,000 |
| Saginaw | 88,000 | 83,200 | 99 | 8,250 | 3,500 | 15.7 | 55,000 |
| Sanilac | 91,000 | 70,700 | 105 | 7,390 | 19,500 | 13.8 | 270,000 |
| Tuscola | 80,000 | 74,600 | 77 | 5,720 | 4,500 | 13.3 | 60,000 |
| Other counties [2] | | | | | 4,000 | 15.0 | 60,000 |
| **East Central** | 435,000 | 367,000 | 90 | 32,900 | 64,000 | 13.8 | 880,000 |

See footnote(s) at end of table.

--continued

**Corn: Acreage, yield, and production, by county, 2001 [1] (continued)**

| County and district | Planted for all purposes | Grain | | | Silage | | |
|---|---|---|---|---|---|---|---|
| | | Harvested | Yield | Production | Harvested | Yield | Production |
| | *Acres* | *Acres* | *Bushels* | *1,000 Bu* | *Acres* | *Tons* | *Tons* |
| Allegan | 76,000 | 67,400 | 127 | 8,550 | 8,300 | 16.7 | 139,000 |
| Berrien | 46,000 | 45,200 | 125 | 5,670 | | | |
| Cass | 68,000 | 66,500 | 115 | 7,650 | | | |
| Kalamazoo | 52,000 | 48,200 | 111 | 5,330 | | | |
| Kent | 43,000 | 34,700 | 115 | 4,000 | 8,100 | 18.3 | 148,000 |
| Ottawa | 44,000 | 32,000 | 113 | 3,600 | 11,500 | 13.4 | 154,000 |
| Van Buren | 36,000 | 34,000 | 100 | 3,400 | | | |
| Other counties [2] | | | | | 6,100 | 17.9 | 109,000 |
| **Southwest** | 365,000 | 328,000 | 116 | 38,200 | 34,000 | 16.2 | 550,000 |
| Barry | 38,000 | 29,300 | 113 | 3,300 | 8,600 | 18.8 | 162,000 |
| Branch | 78,000 | 75,500 | 135 | 10,200 | | | |
| Calhoun | 68,000 | 63,300 | 112 | 7,110 | 4,300 | 16.5 | 71,000 |
| Clinton | 70,000 | 53,100 | 106 | 5,620 | 16,500 | 15.5 | 255,000 |
| Eaton | 60,000 | 57,700 | 123 | 7,110 | 1,600 | 14.4 | 23,000 |
| Hillsdale | 64,000 | 59,100 | 104 | 6,150 | 4,600 | 16.1 | 74,000 |
| Ingham | 52,000 | 48,100 | 101 | 4,850 | 3,500 | 11.4 | 40,000 |
| Ionia | 73,000 | 64,100 | 127 | 8,150 | 8,300 | 12.0 | 100,000 |
| Jackson | 52,000 | 46,300 | 89 | 4,110 | 5,500 | 11.6 | 64,000 |
| St Joseph | 85,000 | 83,700 | 125 | 10,450 | | | |
| Shiawassee | 50,000 | 44,800 | 98 | 4,400 | 4,200 | 12.6 | 53,000 |
| Other counties [2] | | | | | 2,900 | 16.6 | 48,000 |
| **South Central** | 690,000 | 625,000 | 114 | 71,450 | 60,000 | 14.8 | 890,000 |
| Genesee | 28,000 | 26,700 | 75 | 1,990 | | | |
| Lapeer | 36,000 | 31,000 | 84 | 2,600 | 4,800 | 16.7 | 80,000 |
| Lenawee | 96,000 | 88,000 | 124 | 10,900 | 7,300 | 15.8 | 115,000 |
| Livingston | 22,000 | 20,500 | 101 | 2,070 | | | |
| Macomb | 11,000 | 9,800 | 100 | 980 | | | |
| Monroe | 58,000 | 56,800 | 115 | 6,530 | | | |
| St Clair | 26,000 | 24,300 | 100 | 2,420 | 1,300 | 9.2 | 12,000 |
| Washtenaw | 42,000 | 37,300 | 94 | 3,500 | 4,200 | 13.3 | 56,000 |
| Other counties [2] | 6,000 | 5,600 | 55 | 310 | 4,400 | 13.0 | 57,000 |
| **Southeast** | 325,000 | 300,000 | 104 | 31,300 | 22,000 | 14.5 | 320,000 |
| **Michigan** | 2,200,000 | 1,900,000 | 105 | 199,500 | 280,000 | 13.0 | 3,640,000 |

[1] Estimates are not published for counties with less than 500 acres.
[2] Estimates not published separately because of insufficient data or to avoid disclosure of individual operations.

**Dry edible beans, all: Acreage, yield, and production, by county, 2000-2001 [1]**

| County and district | 2000 | | | | 2001 | | | |
|---|---|---|---|---|---|---|---|---|
| | Planted | Harvested | Yield | Production | Planted | Harvested | Yield | Production |
| | *Acres* | *Acres* | *Pounds* | *1,000 cwt* | *Acres* | *Acres* | *Pounds* | *1,000 cwt* |
| Presque Isle | 2,000 | 2,000 | 1,150 | 23 | | | | |
| Other counties [2] | 4,300 | 4,300 | 1,230 | 53 | | | | |
| **Northeast** | 6,300 | 6,300 | 1,210 | 76 | 4,500 | 3,400 | 940 | 32 |
| Gladwin | 1,200 | 1,200 | 1,170 | 14 | | | | |
| Gratiot | 23,800 | 23,600 | 1,550 | 365 | 20,300 | 13,400 | 720 | 96 |
| Isabella | 6,000 | 5,900 | 1,340 | 79 | 5,400 | 3,400 | 620 | 21 |
| Midland | 5,200 | 5,200 | 1,670 | 87 | 4,500 | 3,400 | 880 | 30 |
| Montcalm | 17,700 | 17,500 | 2,550 | 446 | 15,600 | 11,600 | 570 | 66 |
| Other counties [2] | 2,100 | 2,100 | 1,380 | 29 | 3,300 | 1,800 | 500 | 9 |
| **Central** | 56,000 | 55,500 | 1,840 | 1,020 | 49,100 | 33,600 | 660 | 222 |
| Arenac | 8,800 | 8,700 | 1,570 | 137 | 6,400 | 3,800 | 550 | 21 |
| Bay | 26,600 | 26,400 | 1,610 | 425 | 23,200 | 9,200 | 500 | 46 |
| Huron | 91,500 | 86,700 | 1,420 | 1,230 | 70,000 | 44,200 | 570 | 251 |
| Saginaw | 11,400 | 11,400 | 1,580 | 180 | 10,500 | 7,600 | 570 | 43 |
| Sanilac | 18,700 | 17,000 | 1,310 | 223 | 13,400 | 5,700 | 720 | 41 |
| Tuscola | 49,000 | 47,800 | 1,370 | 655 | 29,500 | 16,000 | 460 | 73 |
| **East Central** | 206,000 | 198,000 | 1,440 | 2,850 | 153,000 | 86,500 | 550 | 475 |
| **Southwest** | | | | | 4,300 | 3,900 | 900 | 35 |
| **South Central** | | | | | 1,400 | 800 | 750 | 6 |
| Lapeer | 1,000 | 1,000 | 1,400 | 14 | | | | |
| Other counties [2] | 1,700 | 1,700 | 1,410 | 24 | | | | |
| **Southeast** | 2,700 | 2,700 | 1,410 | 38 | | | | |
| **Other districts [2]** | 14,000 | 12,500 | 1,130 | 141 | 2,700 | 1,800 | 560 | 10 |
| **Michigan** | 285,000 | 275,000 | 1,500 | 4,125 | 215,000 | 130,000 | 600 | 780 |

[1] Estimates not published for counties with less than 500 acres.
[2] Estimates not published separately because of insufficient data or to avoid disclosure of individual operations.

**Dry edible beans, navy: Acreage, yield, and production, by county, 2000-2001 [1]**

| County and district | 2000 | | | | 2001 | | | |
|---|---|---|---|---|---|---|---|---|
| | Planted | Harvested | Yield | Production | Planted | Harvested | Yield | Production |
| | *Acres* | *Acres* | *Pounds* | *1,000 cwt* | *Acres* | *Acres* | *Pounds* | *1,000 cwt* |
| Gratiot | 6,600 | 6,600 | 1,890 | 125 | 4,100 | 2,900 | 760 | 22 |
| Isabella | 1,700 | 1,700 | 1,650 | 28 | | | | |
| Montcalm | | | | | 700 | 600 | 500 | 3 |
| Other counties [2] | 2,700 | 2,700 | 1,740 | 47 | 1,800 | 1,100 | 640 | 7 |
| **Central** | 11,000 | 11,000 | 1,820 | 200 | 6,600 | 4,600 | 700 | 32 |
| Arenac | 1,800 | 1,800 | 1,670 | 30 | | | | |
| Bay | 7,600 | 7,600 | 1,840 | 140 | 6,700 | 2,200 | 410 | 9 |
| Huron | 61,500 | 58,500 | 1,410 | 825 | 32,000 | 14,200 | 570 | 81 |
| Saginaw | 5,400 | 5,400 | 1,940 | 105 | 2,800 | 1,600 | 750 | 12 |
| Sanilac | 7,700 | 6,700 | 1,420 | 95 | | | | |
| Tuscola | 26,000 | 25,000 | 1,380 | 345 | 11,000 | 5,500 | 350 | 19 |
| Other counties [2] | | | | | 4,500 | 1,000 | 900 | 9 |
| **East Central** | 110,000 | 105,000 | 1,470 | 1,540 | 57,000 | 24,500 | 530 | 130 |
| **Other districts [2]** | 4,000 | 4,000 | 1,500 | 60 | 1,400 | 900 | 890 | 8 |
| **Michigan** | 125,000 | 120,000 | 1,500 | 1,800 | 65,000 | 30,000 | 570 | 170 |

[1] Estimates not published for counties with less than 500 acres.
[2] Estimates not published separately because of insufficient data or to avoid disclosure of individual operations.

**Dry edible beans, other: Acreage, yield, and production, by county, 2000-2001 [1]**

| County and district | 2000 | | | | 2001 | | | |
|---|---|---|---|---|---|---|---|---|
| | Planted | Harvested | Yield | Production | Planted | Harvested | Yield | Production |
| | *Acres* | *Acres* | *Pounds* | *1,000 cwt* | *Acres* | *Acres* | *Pounds* | *1,000 cwt* |
| Gratiot | 17,200 | 17,000 | 1,410 | 240 | 16,200 | 10,500 | 700 | 74 |
| Isabella | 4,300 | 4,200 | 1,210 | 51 | | | | |
| Montcalm | | | | | 14,900 | 11,000 | 570 | 63 |
| Other counties [2] | 23,500 | 23,300 | 2,270 | 529 | 11,400 | 7,500 | 710 | 53 |
| **Central** | 45,000 | 44,500 | 1,840 | 820 | 42,500 | 29,000 | 660 | 190 |
| Arenac | 7,000 | 6,900 | 1,550 | 107 | | | | |
| Bay | 19,000 | 18,800 | 1,520 | 285 | 16,500 | 7,000 | 530 | 37 |
| Huron | 30,000 | 28,200 | 1,440 | 405 | 38,000 | 30,000 | 570 | 170 |
| Saginaw | 6,000 | 6,000 | 1,250 | 75 | 7,700 | 6,000 | 520 | 31 |
| Sanilac | 11,000 | 10,300 | 1,240 | 128 | | | | |
| Tuscola | 23,000 | 22,800 | 1,360 | 310 | 18,500 | 10,500 | 510 | 54 |
| Other counties [2] | | | | | 15,300 | 8,500 | 620 | 53 |
| **East Central** | 96,000 | 93,000 | 1,410 | 1,310 | 96,000 | 62,000 | 560 | 345 |
| **Southwest** | | | | | 4,300 | 3,900 | 900 | 35 |
| **Other districts [2]** | 19,000 | 17,500 | 1,110 | 195 | 7,200 | 5,100 | 780 | 40 |
| **Michigan** | 160,000 | 155,000 | 1,500 | 2,325 | 150,000 | 100,000 | 610 | 610 |

[1] Estimates not published for counties with less than 500 acres.
[2] Estimates not published separately because of insufficient data or to avoid disclosure of individual operations.

## Hay: Acreage, yield, and production, by county, 2000-2001 [1]

| County and district | 2000 | | | 2001 | | |
|---|---|---|---|---|---|---|
| | Harvested | Yield | Production | Harvested | Yield | Production |
| | *Acres* | *Tons* | *1,000 Tons* | *Acres* | *Tons* | *1,000 Tons* |
| Alger | 4,500 | 2.7 | 12 | 4,500 | 2.2 | 10 |
| Baraga | 5,500 | 1.3 | 7 | 4,500 | 1.6 | 7 |
| Chippewa | 42,000 | 1.8 | 75 | 42,000 | 1.8 | 77 |
| Delta | 20,000 | 2.4 | 47 | 17,000 | 2.1 | 36 |
| Dickinson | 5,500 | 1.8 | 10 | 5,500 | 3.3 | 18 |
| Houghton | 7,500 | 1.2 | 9 | 6,000 | 1.5 | 9 |
| Iron | 8,000 | 1.9 | 15 | 6,000 | 1.7 | 10 |
| Mackinac | 8,500 | 1.9 | 16 | 8,500 | 2.6 | 22 |
| Marquette | | | | 4,000 | 2.8 | 11 |
| Menominee | 33,000 | 2.9 | 95 | 29,000 | 2.8 | 82 |
| Ontonagon | 11,000 | 1.4 | 15 | 9,000 | 1.8 | 16 |
| Schoolcraft | | | | 4,000 | 2.8 | 11 |
| Other counties [2] | 14,500 | 1.3 | 19 | 5,000 | 2.2 | 11 |
| **Upper Peninsula** | 160,000 | 2.0 | 320 | 145,000 | 2.2 | 320 |
| Antrim | 12,500 | 3.2 | 40 | 10,000 | 2.3 | 23 |
| Benzie | 2,000 | 2.5 | 5 | 2,000 | 2.0 | 4 |
| Charlevoix | 10,500 | 3.2 | 34 | 9,000 | 2.2 | 20 |
| Emmet | 13,000 | 2.3 | 30 | 14,000 | 3.0 | 42 |
| Grand Traverse | 12,500 | 2.4 | 30 | 10,000 | 2.3 | 23 |
| Kalkaska | 4,000 | 2.3 | 9 | 3,500 | 3.1 | 11 |
| Leelanau | 8,500 | 2.5 | 21 | 8,500 | 3.6 | 31 |
| Manistee | 7,000 | 2.1 | 15 | 7,000 | 2.0 | 14 |
| Missaukee | 33,000 | 4.2 | 140 | 30,000 | 3.1 | 93 |
| Wexford | 12,000 | 2.6 | 31 | 11,000 | 2.6 | 29 |
| **Northwest** | 115,000 | 3.1 | 355 | 105,000 | 2.8 | 290 |
| Alcona | 17,500 | 2.3 | 40 | 17,500 | 2.2 | 38 |
| Alpena | 24,500 | 3.3 | 80 | 21,500 | 2.8 | 60 |
| Cheboygan | 15,000 | 2.3 | 35 | 15,000 | 2.3 | 35 |
| Iosco | 13,500 | 2.6 | 35 | 11,500 | 2.6 | 30 |
| Montmorency | 5,700 | 4.4 | 25 | 5,000 | 2.6 | 13 |
| Ogemaw | 25,500 | 5.3 | 135 | 22,000 | 3.0 | 67 |
| Oscoda | 3,800 | 2.4 | 9 | 3,800 | 3.7 | 14 |
| Otsego | 9,000 | 2.2 | 20 | 7,500 | 2.8 | 21 |
| Presque Isle | 18,000 | 2.2 | 40 | 14,000 | 2.6 | 36 |
| Other counties [2] | 2,500 | 2.4 | 6 | 2,200 | 2.7 | 6 |
| **Northeast** | 135,000 | 3.1 | 425 | 120,000 | 2.7 | 320 |
| Mason | 17,000 | 2.9 | 50 | 14,500 | 3.2 | 47 |
| Muskegon | 10,500 | 3.8 | 40 | | | |
| Newaygo | 29,000 | 3.6 | 105 | 27,000 | 3.7 | 100 |
| Oceana | | | | 12,500 | 3.4 | 43 |
| Other counties [2] | 23,500 | 2.6 | 60 | 16,000 | 4.4 | 70 |
| **West Central** | 80,000 | 3.2 | 255 | 70,000 | 3.7 | 260 |
| Clare | 21,000 | 3.0 | 63 | 20,000 | 2.3 | 46 |
| Gladwin | 22,000 | 2.7 | 59 | 18,000 | 2.4 | 44 |
| Gratiot | 13,000 | 4.1 | 53 | 10,000 | 4.0 | 40 |
| Isabella | 42,000 | 3.5 | 145 | 38,000 | 3.5 | 134 |
| Mecosta | 32,000 | 3.1 | 100 | 28,000 | 2.9 | 81 |
| Midland | 6,000 | 2.5 | 15 | 5,000 | 2.6 | 13 |
| Montcalm | 27,000 | 3.3 | 90 | 21,000 | 3.9 | 82 |
| Osceola | 47,000 | 2.9 | 135 | 40,000 | 2.8 | 110 |
| **Central** | 210,000 | 3.1 | 660 | 180,000 | 3.1 | 550 |

See footnote(s) at end of table.

--continued

**Hay: Acreage, yield, and production, by county, 2000-2001 [1] (continued)**

| County and district | 2000 | | | 2001 | | |
|---|---|---|---|---|---|---|
| | Harvested | Yield | Production | Harvested | Yield | Production |
| | *Acres* | *Tons* | *1,000 Tons* | *Acres* | *Tons* | *1,000 Tons* |
| Arenac | 8,500 | 2.9 | 25 | 8,000 | 2.4 | 19 |
| Bay | 8,500 | 4.1 | 35 | 7,000 | 3.1 | 22 |
| Huron | 29,500 | 4.9 | 145 | 28,000 | 4.1 | 115 |
| Saginaw | 9,500 | 4.2 | 40 | 7,000 | 3.9 | 27 |
| Sanilac | 51,000 | 4.3 | 220 | 48,000 | 5.5 | 266 |
| Tuscola | 23,000 | 4.1 | 95 | 17,000 | 4.2 | 71 |
| **East Central** | 130,000 | 4.3 | 560 | 115,000 | 4.5 | 520 |
| Allegan | 24,500 | 4.3 | 105 | 22,000 | 4.0 | 87 |
| Berrien | 7,500 | 4.0 | 30 | 6,500 | 2.9 | 19 |
| Cass | 12,000 | 2.9 | 35 | 10,000 | 3.0 | 30 |
| Kalamazoo | 9,000 | 2.8 | 25 | 8,000 | 2.9 | 23 |
| Kent | 31,000 | 4.2 | 130 | 27,000 | 4.2 | 114 |
| Ottawa | 26,000 | 3.7 | 95 | 23,000 | 4.0 | 91 |
| Van Buren | 15,000 | 3.0 | 45 | 13,500 | 3.4 | 46 |
| **Southwest** | 125,000 | 3.7 | 465 | 110,000 | 3.7 | 410 |
| Barry | 29,000 | 3.1 | 90 | 26,000 | 3.2 | 83 |
| Branch | 11,500 | 4.3 | 50 | 10,000 | 5.2 | 52 |
| Calhoun | 19,000 | 3.2 | 60 | 15,000 | 3.0 | 45 |
| Clinton | 24,000 | 5.4 | 130 | 21,000 | 4.6 | 97 |
| Eaton | 16,000 | 3.4 | 55 | 15,000 | 3.2 | 48 |
| Hillsdale | 20,000 | 3.3 | 66 | 18,000 | 5.1 | 91 |
| Ingham | 18,000 | 4.7 | 85 | 18,000 | 4.7 | 85 |
| Ionia | 26,000 | 4.6 | 120 | 20,000 | 4.6 | 91 |
| Jackson | 22,000 | 4.5 | 100 | 22,000 | 3.9 | 85 |
| St Joseph | 13,000 | 3.5 | 45 | 11,000 | 4.0 | 44 |
| Shiawassee | 16,500 | 3.9 | 64 | 14,000 | 3.5 | 49 |
| **South Central** | 215,000 | 4.0 | 865 | 190,000 | 4.1 | 770 |
| Genesee | 11,000 | 3.1 | 34 | 10,000 | 3.1 | 31 |
| Lapeer | 31,500 | 3.3 | 105 | 29,000 | 2.6 | 76 |
| Lenawee | 11,000 | 4.5 | 50 | 10,000 | 3.4 | 34 |
| Livingston | 11,500 | 3.0 | 35 | 10,000 | 3.3 | 33 |
| Macomb | 5,000 | 3.0 | 15 | 4,000 | 2.0 | 8 |
| Monroe | 4,500 | 4.0 | 18 | 4,500 | 3.8 | 17 |
| Oakland | 8,000 | 2.9 | 23 | 7,000 | 4.6 | 32 |
| St Clair | 24,000 | 2.7 | 65 | 18,000 | 2.7 | 49 |
| Washtenaw | 22,000 | 3.4 | 75 | 21,000 | 3.2 | 67 |
| Wayne | 1,500 | 3.3 | 5 | 1,500 | 2.0 | 3 |
| **Southeast** | 130,000 | 3.3 | 425 | 115,000 | 3.0 | 350 |
| **Michigan** | 1,300,000 | 3.33 | 4,330 | 1,150,000 | 3.30 | 3,790 |

[1] Estimates not published for counties with less than 500 acres.
[2] Estimates not published separately because of insufficient data or to avoid disclosure of individual operations.

## Oats: Acreage, yield, and production, by county, 2000-2001 [1]

| County and district | 2000 | | | | 2001 | | | |
|---|---|---|---|---|---|---|---|---|
| | Planted | Harvested | Yield | Production | Planted | Harvested | Yield | Production |
| | *Acres* | *Acres* | *Bushels* | *1,000 Bu* | *Acres* | *Acres* | *Bushels* | *1,000 Bu* |
| Chippewa | 2,200 | 2,000 | 50 | 100 | 1,700 | 1,200 | 37 | 44 |
| Delta | 1,800 | 1,500 | 66 | 99 | 1,300 | 1,000 | 67 | 67 |
| Dickinson | 800 | 500 | 60 | 30 | | | | |
| Iron | 700 | 500 | 36 | 18 | | | | |
| Menominee | 2,300 | 2,000 | 56 | 112 | 1,700 | 1,400 | 52 | 73 |
| Ontonagon | 750 | 550 | 56 | 31 | 500 | 300 | 67 | 20 |
| Other counties [2] | 2,450 | 1,950 | 41 | 80 | 2,800 | 2,100 | 55 | 116 |
| **Upper Peninsula** | 11,000 | 9,000 | 52 | 470 | 8,000 | 6,000 | 53 | 320 |
| Emmet | 1,100 | 950 | 57 | 54 | 600 | 500 | 62 | 31 |
| Grand Traverse | 2,600 | 2,200 | 76 | 168 | 2,400 | 1,900 | 52 | 98 |
| Leelanau | | | | | 500 | 400 | 55 | 22 |
| Missaukee | 1,650 | 1,400 | 51 | 71 | | | | |
| Wexford | 900 | 700 | 40 | 28 | 700 | 500 | 48 | 24 |
| Other counties [2] | 2,250 | 1,750 | 57 | 99 | 2,800 | 2,200 | 61 | 135 |
| **Northwest** | 8,500 | 7,000 | 60 | 420 | 7,000 | 5,500 | 56 | 310 |
| Alcona | 1,000 | 800 | 76 | 61 | 800 | 700 | 61 | 43 |
| Alpena | 3,700 | 3,100 | 71 | 220 | 2,800 | 2,500 | 61 | 152 |
| Iosco | 1,350 | 1,100 | 67 | 74 | 1,300 | 1,000 | 60 | 60 |
| Ogemaw | 2,800 | 2,000 | 75 | 150 | 1,800 | 1,400 | 49 | 69 |
| Otsego | 900 | 750 | 68 | 51 | | | | |
| Presque Isle | 4,100 | 3,400 | 78 | 265 | 2,600 | 2,200 | 38 | 84 |
| Other counties [2] | 1,150 | 850 | 46 | 39 | 1,700 | 1,200 | 43 | 52 |
| **Northeast** | 15,000 | 12,000 | 72 | 860 | 11,000 | 9,000 | 51 | 460 |
| Mason | 1,200 | 1,100 | 54 | 59 | 1,100 | 900 | 48 | 43 |
| Newaygo | 1,400 | 1,200 | 63 | 76 | 900 | 600 | 55 | 33 |
| Oceana | 600 | 500 | 36 | 18 | | | | |
| Other counties [2] | 800 | 700 | 39 | 27 | 1,000 | 500 | 48 | 24 |
| **West Central** | 4,000 | 3,500 | 51 | 180 | 3,000 | 2,000 | 50 | 100 |
| Clare | 900 | 650 | 51 | 33 | | | | |
| Gladwin | 1,100 | 900 | 39 | 35 | 700 | 600 | 70 | 42 |
| Isabella | 2,600 | 2,100 | 71 | 150 | 1,200 | 1,000 | 62 | 62 |
| Mecosta | 1,400 | 1,100 | 59 | 65 | 1,100 | 900 | 48 | 43 |
| Montcalm | 2,700 | 1,900 | 58 | 110 | 2,000 | 1,700 | 62 | 105 |
| Osceola | 1,100 | 900 | 37 | 33 | 1,100 | 900 | 43 | 39 |
| Other counties [2] | 1,200 | 950 | 78 | 74 | 1,900 | 1,400 | 64 | 89 |
| **Central** | 11,000 | 8,500 | 59 | 500 | 8,000 | 6,500 | 58 | 380 |
| Arenac | 1,900 | 1,500 | 55 | 83 | | | | |
| Bay | 900 | 700 | 63 | 44 | 600 | 500 | 84 | 42 |
| Huron | 3,800 | 2,600 | 67 | 175 | | | | |
| Saginaw | 1,300 | 1,000 | 63 | 63 | 800 | 700 | 61 | 43 |
| Sanilac | 6,800 | 5,400 | 80 | 430 | 4,200 | 3,500 | 84 | 295 |
| Tuscola | 2,300 | 1,800 | 83 | 150 | 1,500 | 1,300 | 96 | 125 |
| Other counties [2] | | | | | 2,900 | 2,000 | 78 | 155 |
| **East Central** | 17,000 | 13,000 | 73 | 945 | 10,000 | 8,000 | 83 | 660 |

See footnote(s) at end of table.

--continued

**Oats: Acreage, yield, and production, by county, 2000-2001 [1] (continued)**

| County and district | 2000 | | | | 2001 | | | |
|---|---|---|---|---|---|---|---|---|
| | Planted | Harvested | Yield | Production | Planted | Harvested | Yield | Production |
| | *Acres* | *Acres* | *Bushels* | *1,000 Bu* | *Acres* | *Acres* | *Bushels* | *1,000 Bu* |
| Allegan | 1,650 | 1,400 | 61 | 85 | 1,000 | 800 | 71 | 57 |
| Cass | 750 | 650 | 35 | 23 | | | | |
| Kalamazoo | 900 | 800 | 73 | 58 | 700 | 600 | 78 | 47 |
| Kent | 1,900 | 1,700 | 46 | 79 | | | | |
| Ottawa | 1,500 | 1,300 | 72 | 94 | 1,100 | 700 | 61 | 43 |
| Other counties [2] | 1,300 | 1,150 | 44 | 51 | 2,200 | 1,400 | 66 | 93 |
| **Southwest** | 8,000 | 7,000 | 56 | 390 | 5,000 | 3,500 | 69 | 240 |
| Branch | 800 | 600 | 75 | 45 | | | | |
| Calhoun | 1,200 | 1,100 | 70 | 77 | 1,700 | 1,400 | 71 | 100 |
| Clinton | 1,000 | 850 | 81 | 69 | 800 | 700 | 71 | 50 |
| Eaton | 800 | 650 | 77 | 50 | 650 | 500 | 76 | 38 |
| Hillsdale | 1,000 | 800 | 63 | 50 | 800 | 700 | 64 | 45 |
| Ionia | 1,400 | 1,200 | 71 | 85 | 1,150 | 900 | 89 | 80 |
| Jackson | 1,450 | 1,100 | 55 | 60 | 1,400 | 1,200 | 56 | 67 |
| Shiawassee | 1,900 | 1,600 | 72 | 115 | 1,600 | 1,400 | 79 | 110 |
| Other counties [2] | 1,450 | 1,100 | 63 | 69 | 1,900 | 1,200 | 75 | 90 |
| **South Central** | 11,000 | 9,000 | 69 | 620 | 10,000 | 8,000 | 73 | 580 |
| Lapeer | 2,300 | 1,400 | 75 | 105 | 2,400 | 1,800 | 61 | 110 |
| Lenawee | 1,700 | 1,000 | 71 | 71 | | | | |
| Macomb | | | | | 500 | 400 | 65 | 26 |
| Monroe | 1,000 | 700 | 80 | 56 | 900 | 800 | 100 | 80 |
| St Clair | 1,000 | 700 | 61 | 43 | 900 | 800 | 75 | 60 |
| Washtenaw | 1,600 | 1,000 | 70 | 70 | | | | |
| Other counties [2] | 1,900 | 1,200 | 58 | 70 | 3,300 | 2,700 | 72 | 194 |
| **Southeast** | 9,500 | 6,000 | 69 | 415 | 8,000 | 6,500 | 72 | 470 |
| **Michigan** | 95,000 | 75,000 | 64 | 4,800 | 70,000 | 55,000 | 64 | 3,520 |

[1] Estimates not published for counties with less than 500 acres.
[2] Estimates not published separately because of insufficient data or to avoid disclosure of individual operations.

**Potatoes: Acreage, yield, and production, by county, 2000-2001 [1]**

| County and district | 2000 | | | | 2001 | | | |
|---|---|---|---|---|---|---|---|---|
| | Planted | Harvested | Yield | Production | Planted | Harvested | Yield | Production |
| | *Acres* | *Acres* | *Cwt* | *1,000 cwt* | *Acres* | *Acres* | *Cwt* | *1,000 cwt* |
| Delta | 900 | 850 | 305 | 260 | 900 | 900 | 220 | 200 |
| Dickinson | 500 | 500 | 300 | 150 | 700 | 700 | 185 | 130 |
| Luce | 500 | 500 | 300 | 150 | | | | |
| Marquette | 700 | 650 | 260 | 170 | | | | |
| Other counties [2] | 600 | 600 | 285 | 170 | 1,200 | 1,200 | 190 | 230 |
| **Upper Peninsula** | 3,200 | 3,100 | 290 | 900 | 2,800 | 2,800 | 200 | 560 |
| Antrim | 1,500 | 1,500 | 235 | 350 | | | | |
| Kalkaska | 1,100 | 1,100 | 345 | 380 | | | | |
| Other counties [2] | 300 | 300 | 265 | 80 | | | | |
| **Northwest** | 2,900 | 2,900 | 280 | 810 | | | | |
| Presque Isle | 2,100 | 2,050 | 260 | 535 | 2,200 | 2,150 | 190 | 410 |
| Other counties [2] | 800 | 750 | 285 | 215 | 500 | 500 | 240 | 120 |
| **Northeast** | 2,900 | 2,800 | 270 | 750 | 2,700 | 2,650 | 200 | 530 |
| Gratiot | 550 | 550 | 300 | 165 | | | | |
| Isabella | 900 | 900 | 345 | 310 | | | | |
| Mecosta | 3,800 | 3,700 | 380 | 1,400 | | | | |
| Montcalm | 12,800 | 12,400 | 355 | 4,400 | 13,000 | 12,900 | 330 | 4,230 |
| Other counties [2] | 450 | 450 | 345 | 155 | 5,000 | 5,000 | 335 | 1,680 |
| **Central** | 18,500 | 18,000 | 355 | 6,430 | 18,000 | 17,900 | 330 | 5,910 |
| Arenac | 500 | 500 | 330 | 165 | 700 | 250 | 280 | 70 |
| Bay | 4,000 | 3,800 | 240 | 920 | 2,600 | 2,450 | 270 | 660 |
| Huron | 1,000 | 1,000 | 205 | 205 | | | | |
| Saginaw | 900 | 850 | 260 | 220 | | | | |
| Sanilac | 600 | 500 | 240 | 120 | | | | |
| Tuscola | 1,900 | 1,850 | 275 | 510 | 1,200 | 1,200 | 250 | 300 |
| Other counties [2] | | | | | 1,900 | 1,900 | 280 | 536 |
| **East Central** | 8,900 | 8,500 | 250 | 2,140 | 6,400 | 5,800 | 270 | 1,566 |
| Allegan | 1,000 | 900 | 265 | 240 | 1,000 | 950 | 305 | 290 |
| Cass | 700 | 700 | 300 | 210 | | | | |
| Kalamazoo | 500 | 500 | 300 | 150 | | | | |
| Other counties [2] | 300 | 300 | 335 | 100 | 2,100 | 2,100 | 285 | 595 |
| **Southwest** | 2,500 | 2,400 | 290 | 700 | 3,100 | 3,050 | 290 | 885 |
| Branch | 650 | 650 | 310 | 200 | | | | |
| Ionia | 600 | 600 | 300 | 180 | | | | |
| St Joseph | 4,800 | 4,700 | 350 | 1,640 | 5,300 | 5,250 | 390 | 2,050 |
| Other counties [2] | 1,250 | 1,250 | 315 | 395 | 2,200 | 2,200 | 325 | 710 |
| **South Central** | 7,300 | 7,200 | 335 | 2,415 | 7,500 | 7,450 | 370 | 2,760 |
| Monroe | | | | | 1,200 | 1,150 | 235 | 270 |
| Other counties [2] | | | | | 1,100 | 1,050 | 290 | 302 |
| **Southeast** | | | | | 2,300 | 2,200 | 260 | 572 |
| **Other districts [2]** | 2,800 | 2,600 | 315 | 818 | 3,200 | 3,150 | 370 | 1,167 |
| **Michigan** | 49,000 | 47,500 | 315 | 14,963 | 46,000 | 45,000 | 310 | 13,950 |

[1] Estimates not published for counties with less than 500 acres.
[2] Estimates not published separately because of insufficient data or to avoid disclosure of individual operations.

**Soybeans: Acreage, yield, and production, by county, 2000-2001 [1]**

| County and district | 2000 | | | | 2001 | | | |
|---|---|---|---|---|---|---|---|---|
| | Planted | Harvested | Yield | Production | Planted | Harvested | Yield | Production |
| | *Acres* | *Acres* | *Bushels* | *1,000 Bu* | *Acres* | *Acres* | *Bushels* | *1,000 Bu* |
| Alpena | | | | | 900 | 800 | 16 | 13 |
| Iosco | | | | | 2,300 | 2,000 | 26 | 52 |
| Montmorency | | | | | 900 | 900 | 21 | 19 |
| Ogemaw | 500 | 500 | 34 | 17 | 1,000 | 1,000 | 20 | 20 |
| Presque Isle | | | | | 2,200 | 1,900 | 26 | 50 |
| Other counties [2] | 4,000 | 3,800 | 36 | 138 | 700 | 400 | 15 | 6 |
| **Northeast** | 4,500 | 4,300 | 36 | 155 | 8,000 | 7,000 | 23 | 160 |
| Mason | 1,700 | 1,600 | 31 | 49 | | | | |
| Muskegon | 6,500 | 6,200 | 28 | 176 | 6,200 | 6,000 | 27 | 160 |
| Newaygo | 5,000 | 4,900 | 30 | 149 | 5,500 | 5,200 | 22 | 115 |
| Oceana | | | | | 3,000 | 2,700 | 24 | 65 |
| Other counties [2] | 2,800 | 2,800 | 27 | 76 | 2,300 | 2,100 | 19 | 40 |
| **West Central** | 16,000 | 15,500 | 29 | 450 | 17,000 | 16,000 | 24 | 380 |
| Gladwin | 3,600 | 3,200 | 29 | 93 | 4,000 | 4,000 | 23 | 90 |
| Gratiot | 85,000 | 83,000 | 34 | 2,840 | 84,000 | 82,000 | 36 | 2,980 |
| Isabella | 40,000 | 40,000 | 37 | 1,470 | 48,000 | 47,000 | 30 | 1,400 |
| Mecosta | | | | | 1,500 | 1,500 | 15 | 22 |
| Midland | 23,000 | 22,500 | 38 | 850 | 23,000 | 23,000 | 25 | 565 |
| Montcalm | 16,500 | 16,500 | 32 | 530 | 18,000 | 18,000 | 31 | 560 |
| Other counties [2] | 1,900 | 1,800 | 26 | 47 | 1,500 | 1,500 | 15 | 23 |
| **Central** | 170,000 | 167,000 | 35 | 5,830 | 180,000 | 177,000 | 32 | 5,640 |
| Arenac | 14,000 | 13,000 | 35 | 460 | 18,000 | 17,000 | 17 | 290 |
| Bay | 45,000 | 45,000 | 38 | 1,710 | 44,000 | 43,000 | 23 | 990 |
| Huron | 47,000 | 47,000 | 39 | 1,850 | 73,000 | 72,000 | 23 | 1,650 |
| Saginaw | 118,000 | 116,000 | 34 | 4,000 | 108,000 | 106,000 | 22 | 2,360 |
| Sanilac | 129,000 | 127,000 | 38 | 4,770 | 139,000 | 136,000 | 23 | 3,150 |
| Tuscola | 77,000 | 77,000 | 39 | 3,010 | 98,000 | 96,000 | 20 | 1,960 |
| **East Central** | 430,000 | 425,000 | 37 | 15,800 | 480,000 | 470,000 | 22 | 10,400 |
| Allegan | 47,000 | 46,000 | 31 | 1,440 | 41,000 | 41,000 | 42 | 1,720 |
| Berrien | 47,000 | 47,000 | 31 | 1,440 | 49,000 | 49,000 | 41 | 2,030 |
| Cass | 50,000 | 49,000 | 34 | 1,690 | 52,000 | 52,000 | 38 | 2,000 |
| Kalamazoo | 35,000 | 35,000 | 38 | 1,340 | 38,000 | 38,000 | 38 | 1,430 |
| Kent | 22,000 | 22,000 | 30 | 670 | 22,000 | 22,000 | 36 | 790 |
| Ottawa | 22,000 | 22,000 | 33 | 730 | 21,000 | 21,000 | 38 | 800 |
| Van Buren | 27,000 | 26,000 | 35 | 920 | 22,000 | 22,000 | 33 | 730 |
| **Southwest** | 250,000 | 247,000 | 33 | 8,230 | 245,000 | 245,000 | 39 | 9,500 |
| Barry | 30,000 | 30,000 | 37 | 1,110 | 27,000 | 27,000 | 37 | 990 |
| Branch | 71,000 | 70,000 | 38 | 2,650 | 77,000 | 77,000 | 40 | 3,090 |
| Calhoun | 65,000 | 65,000 | 39 | 2,510 | 73,000 | 73,000 | 35 | 2,550 |
| Clinton | 80,000 | 79,000 | 36 | 2,810 | 83,000 | 83,000 | 33 | 2,780 |
| Eaton | 70,000 | 69,000 | 36 | 2,500 | 68,000 | 68,000 | 38 | 2,600 |
| Hillsdale | 72,000 | 71,000 | 34 | 2,430 | 77,000 | 77,000 | 32 | 2,470 |
| Ingham | 57,000 | 57,000 | 43 | 2,440 | 56,000 | 56,000 | 29 | 1,650 |
| Ionia | 61,000 | 61,000 | 37 | 2,270 | 61,000 | 61,000 | 41 | 2,500 |
| Jackson | 43,000 | 43,000 | 38 | 1,630 | 44,000 | 44,000 | 24 | 1,060 |
| St Joseph | 50,000 | 50,000 | 39 | 1,960 | 52,000 | 52,000 | 40 | 2,100 |
| Shiawassee | 86,000 | 85,000 | 32 | 2,690 | 87,000 | 87,000 | 32 | 2,810 |
| **South Central** | 685,000 | 680,000 | 37 | 25,000 | 705,000 | 705,000 | 35 | 24,600 |

See footnote(s) at end of table.

--continued

**Soybeans: Acreage, yield, and production, by county, 2000-2001 [1] (continued)**

| County and district | 2000 | | | | 2001 | | | |
|---|---|---|---|---|---|---|---|---|
| | Planted | Harvested | Yield | Production | Planted | Harvested | Yield | Production |
| | *Acres* | *Acres* | *Bushels* | *1,000 Bu* | *Acres* | *Acres* | *Bushels* | *1,000 Bu* |
| Genesee | 42,000 | 42,000 | 32 | 1,350 | 45,000 | 44,000 | 19 | 845 |
| Lapeer | 46,000 | 46,000 | 38 | 1,730 | 52,000 | 51,000 | 24 | 1,230 |
| Lenawee | 133,000 | 132,000 | 38 | 4,950 | 134,000 | 133,000 | 30 | 4,000 |
| Livingston | 21,000 | 21,000 | 40 | 850 | 23,000 | 23,000 | 29 | 660 |
| Macomb | 23,000 | 22,000 | 30 | 660 | 26,000 | 26,000 | 22 | 580 |
| Monroe | 100,000 | 99,000 | 39 | 3,830 | 94,000 | 94,000 | 27 | 2,550 |
| St Clair | 70,000 | 70,000 | 30 | 2,120 | 75,000 | 74,000 | 23 | 1,680 |
| Washtenaw | 46,000 | 46,000 | 38 | 1,750 | 50,000 | 49,000 | 28 | 1,350 |
| Other counties [2] | 9,000 | 9,000 | 29 | 260 | 11,000 | 11,000 | 19 | 205 |
| **Southeast** | 490,000 | 487,000 | 36 | 17,500 | 510,000 | 505,000 | 26 | 13,100 |
| Other districts [2] | 4,500 | 4,200 | 27 | 115 | 5,000 | 5,000 | 24 | 120 |
| **Michigan** | 2,050,000 | 2,030,000 | 36 | 73,080 | 2,150,000 | 2,130,000 | 30 | 63,900 |

[1] Estimates not published for counties with less than 500 acres.
[2] Estimates not published separately because of insufficient data or to avoid disclosure of individual operations.

**Sugarbeets: Acreage, yield, and production, by county, 2000-2001 [1]**

| County and district | 2000 | | | | 2001 | | | |
|---|---|---|---|---|---|---|---|---|
| | Planted | Harvested | Yield | Production | Planted | Harvested | Yield | Production |
| | *Acres* | *Acres* | *Tons* | *1,000 Tons* | *Acres* | *Acres* | *Tons* | *1,000 Tons* |
| Gladwin | 1,600 | 1,400 | 16.4 | 23 | 1,400 | 1,200 | 16.7 | 20 |
| Gratiot | 21,800 | 15,500 | 19.5 | 302 | 20,800 | 18,500 | 18.9 | 349 |
| Isabella | 2,500 | 2,300 | 19.1 | 44 | 2,300 | 2,000 | 14.0 | 28 |
| Midland | 4,000 | 3,600 | 18.3 | 66 | 3,900 | 3,500 | 18.0 | 63 |
| Other counties [2] | 1,600 | 1,400 | 21.4 | 30 | 1,600 | 1,300 | 19.2 | 25 |
| **Central** | 31,500 | 24,200 | 19.2 | 465 | 30,000 | 26,500 | 18.3 | 485 |
| Arenac | 5,000 | 5,000 | 17.0 | 85 | 4,900 | 4,500 | 18.9 | 85 |
| Bay | 20,500 | 18,500 | 18.4 | 340 | 20,200 | 19,500 | 18.2 | 355 |
| Huron | 57,000 | 51,500 | 21.0 | 1,080 | 57,000 | 52,000 | 20.2 | 1,050 |
| Saginaw | 20,000 | 17,500 | 22.0 | 385 | 19,300 | 18,000 | 20.0 | 360 |
| Sanilac | 21,500 | 19,000 | 21.1 | 400 | 19,600 | 18,000 | 19.4 | 350 |
| Tuscola | 28,000 | 26,000 | 21.2 | 550 | 25,000 | 24,000 | 19.2 | 460 |
| **East Central** | 152,000 | 137,500 | 20.7 | 2,840 | 146,000 | 136,000 | 19.6 | 2,660 |
| Genesee | 900 | 800 | 21.3 | 17 | 700 | 700 | 21.4 | 15 |
| Lenawee | 1,300 | 900 | 22.2 | 20 | | | | |
| St Clair | 1,600 | 1,300 | 19.2 | 25 | 900 | 800 | 21.3 | 17 |
| Other counties [2] | 700 | 500 | 34.0 | 17 | 1,400 | 1,100 | 21.8 | 24 |
| **Southeast** | 4,500 | 3,500 | 22.6 | 79 | 3,000 | 2,600 | 21.5 | 56 |
| **Other districts [2]** | 1,000 | 800 | 23.8 | 19 | 1,000 | 900 | 21.1 | 19 |
| **Michigan** | 189,000 | 166,000 | 20.5 | 3,403 | 180,000 | 166,000 | 19.4 | 3,220 |

[1] Estimates not published for counties with less than 500 acres.
[2] Estimates not published separately because of insufficient data or to avoid disclosure of individual operations.

**Wheat: Acreage, yield, and production, by county, 2000-2001 [1]**

| County and district | 2000 | | | | 2001 | | | |
|---|---|---|---|---|---|---|---|---|
| | Planted | Harvested | Yield | Production | Planted | Harvested | Yield | Production |
| | *Acres* | *Acres* | *Bushels* | *1,000 Bu* | *Acres* | *Acres* | *Bushels* | *1,000 Bu* |
| **Upper Peninsula** | 2,000 | 1,900 | 32 | 60 | | | | |
| Grand Traverse | 1,650 | 1,550 | 48 | 75 | | | | |
| Other counties [2] | 1,850 | 1,650 | 55 | 90 | | | | |
| **Northwest** | 3,500 | 3,200 | 52 | 165 | | | | |
| Alpena | | | | | 3,400 | 3,300 | 70 | 230 |
| Montmorency | 800 | 800 | 93 | 74 | | | | |
| Ogemaw | 700 | 600 | 83 | 50 | 700 | 700 | 57 | 40 |
| Presque Isle | 1,900 | 1,600 | 66 | 105 | 2,300 | 2,300 | 54 | 125 |
| Other counties [2] | 4,600 | 4,300 | 64 | 276 | 3,600 | 3,500 | 56 | 195 |
| **Northeast** | 8,000 | 7,300 | 69 | 505 | 10,000 | 9,800 | 60 | 590 |
| Mason | 4,300 | 3,700 | 57 | 210 | 4,100 | 3,900 | 58 | 225 |
| Muskegon | 1,500 | 1,200 | 50 | 60 | 1,900 | 1,800 | 53 | 95 |
| Newaygo | 1,800 | 1,100 | 64 | 70 | 1,400 | 1,400 | 54 | 76 |
| Other counties [2] | 1,900 | 1,600 | 56 | 90 | 1,600 | 1,600 | 46 | 74 |
| **West Central** | 9,500 | 7,600 | 57 | 430 | 9,000 | 8,700 | 54 | 470 |
| Clare | 900 | 900 | 67 | 60 | | | | |
| Gladwin | 1,900 | 1,600 | 56 | 90 | 2,000 | 1,900 | 58 | 110 |
| Gratiot | 16,000 | 14,700 | 78 | 1,150 | 18,000 | 17,900 | 70 | 1,250 |
| Isabella | 14,000 | 14,000 | 69 | 965 | 15,500 | 15,400 | 59 | 910 |
| Mecosta | | | | | 1,400 | 1,300 | 50 | 65 |
| Midland | 3,000 | 3,000 | 80 | 240 | 3,700 | 3,700 | 81 | 300 |
| Montcalm | 17,000 | 15,700 | 69 | 1,090 | 18,000 | 17,900 | 56 | 1,000 |
| Other counties [2] | 2,200 | 2,100 | 50 | 105 | 1,400 | 1,400 | 46 | 65 |
| **Central** | 55,000 | 52,000 | 71 | 3,700 | 60,000 | 59,500 | 62 | 3,700 |
| Arenac | 6,000 | 6,000 | 78 | 465 | 6,500 | 6,300 | 62 | 390 |
| Bay | 6,000 | 5,500 | 88 | 485 | 8,000 | 7,900 | 79 | 625 |
| Huron | 38,000 | 36,800 | 87 | 3,200 | 46,000 | 45,800 | 72 | 3,310 |
| Saginaw | 26,000 | 25,900 | 80 | 2,060 | 29,000 | 28,900 | 70 | 2,010 |
| Sanilac | 45,000 | 44,800 | 79 | 3,560 | 52,000 | 51,700 | 66 | 3,425 |
| Tuscola | 19,000 | 19,000 | 86 | 1,630 | 23,500 | 23,400 | 68 | 1,590 |
| **East Central** | 140,000 | 138,000 | 83 | 11,400 | 165,000 | 164,000 | 69 | 11,350 |
| Allegan | 10,000 | 7,500 | 67 | 505 | 9,500 | 8,100 | 64 | 520 |
| Berrien | 5,000 | 3,500 | 54 | 190 | 4,800 | 4,700 | 51 | 240 |
| Cass | 7,000 | 2,000 | 58 | 115 | | | | |
| Kalamazoo | 5,700 | 4,200 | 63 | 265 | 5,100 | 5,000 | 54 | 270 |
| Kent | 6,500 | 5,000 | 69 | 345 | 6,600 | 6,400 | 56 | 360 |
| Ottawa | 6,000 | 4,500 | 58 | 260 | 6,000 | 5,600 | 57 | 320 |
| Van Buren | 1,800 | 1,300 | 54 | 70 | | | | |
| Other counties [2] | | | | | 8,000 | 4,700 | 47 | 220 |
| **Southwest** | 42,000 | 28,000 | 63 | 1,750 | 40,000 | 34,500 | 56 | 1,930 |

See footnote(s) at end of table.

--continued

**Wheat: Acreage, yield, and production, by county, 2000-2001 [1] (continued)**

| County and district | 2000 | | | | 2001 | | | |
|---|---|---|---|---|---|---|---|---|
| | Planted | Harvested | Yield | Production | Planted | Harvested | Yield | Production |
| | *Acres* | *Acres* | *Bushels* | *1,000 Bu* | *Acres* | *Acres* | *Bushels* | *1,000 Bu* |
| Barry | 8,900 | 8,900 | 62 | 550 | 8,300 | 8,200 | 65 | 530 |
| Branch | 6,300 | 6,300 | 52 | 330 | 7,700 | 7,700 | 51 | 390 |
| Calhoun | 12,000 | 12,000 | 55 | 660 | 13,000 | 13,000 | 55 | 720 |
| Clinton | 22,000 | 21,900 | 72 | 1,570 | 23,500 | 23,400 | 62 | 1,450 |
| Eaton | 18,000 | 18,000 | 65 | 1,170 | 19,000 | 18,900 | 66 | 1,250 |
| Hillsdale | 11,500 | 11,500 | 63 | 720 | 15,500 | 15,200 | 56 | 850 |
| Ingham | 14,000 | 14,000 | 74 | 1,030 | 16,000 | 15,900 | 72 | 1,150 |
| Ionia | 16,000 | 16,000 | 69 | 1,100 | 17,000 | 16,900 | 60 | 1,010 |
| Jackson | 9,000 | 8,900 | 56 | 500 | 9,800 | 9,800 | 52 | 510 |
| St Joseph | 2,300 | 2,300 | 61 | 140 | 2,700 | 2,700 | 59 | 160 |
| Shiawassee | 30,000 | 29,200 | 66 | 1,930 | 32,500 | 32,300 | 55 | 1,780 |
| **South Central** | 150,000 | 149,000 | 65 | 9,700 | 165,000 | 164,000 | 60 | 9,800 |
| Genesee | 9,900 | 9,600 | 73 | 700 | 10,300 | 10,200 | 64 | 650 |
| Lapeer | 7,600 | 7,500 | 73 | 550 | 6,900 | 6,900 | 59 | 410 |
| Lenawee | 37,000 | 35,700 | 73 | 2,590 | 33,000 | 32,900 | 74 | 2,420 |
| Livingston | 7,000 | 6,900 | 78 | 540 | 7,400 | 7,400 | 65 | 480 |
| Macomb | 4,800 | 4,800 | 77 | 370 | 3,700 | 3,600 | 58 | 210 |
| Monroe | 23,500 | 18,600 | 82 | 1,520 | 25,000 | 24,900 | 75 | 1,870 |
| St Clair | 13,000 | 12,800 | 72 | 920 | 11,600 | 11,500 | 63 | 730 |
| Washtenaw | 15,000 | 14,900 | 66 | 980 | 15,500 | 15,500 | 61 | 950 |
| Other counties [2] | 2,200 | 2,200 | 55 | 120 | 1,600 | 1,600 | 50 | 80 |
| **Southeast** | 120,000 | 113,000 | 73 | 8,290 | 115,000 | 114,500 | 68 | 7,800 |
| **Other districts [2]** | | | | | 6,000 | 5,000 | 40 | 200 |
| **Michigan** | 530,000 | 500,000 | 72 | 36,000 | 570,000 | 560,000 | 64 | 35,840 |

[1] Estimates not published for counties with less than 500 acres.
[2] Estimates not published separately because of insufficient data or to avoid disclosure of individual operations.

**Cattle: January 1, by county, 2001-2002 [1]**

| County and district | All cattle and calves | | All cows that have calved | | Milk cows | | Beef cows | |
|---|---|---|---|---|---|---|---|---|
| | 2001 | 2002 | 2001 | 2002 | 2001 | 2002 | 2001 | 2002 |
| | *Head* | *Head* | *Head* | *Head* | *Head* | *Head* | *Head* | *Head* |
| Alger | 2,100 | 2,500 | 550 | 600 | | | | |
| Baraga | 1,200 | 800 | 650 | 550 | | | | |
| Chippewa | 8,200 | 8,600 | 2,600 | 2,300 | 900 | 1,000 | 1,700 | 1,300 |
| Delta | 10,200 | 9,200 | 3,800 | 3,600 | 1,900 | 1,800 | 1,900 | 1,800 |
| Dickinson | 2,000 | 2,100 | 1,150 | 1,000 | 650 | | 500 | |
| Houghton | 1,700 | 2,200 | 550 | 700 | | | | |
| Iron | 2,100 | 2,000 | 800 | 800 | | | | |
| Luce | 800 | 700 | | | | | | |
| Mackinac | 2,600 | 2,400 | 1,100 | 1,050 | | | | |
| Marquette | 1,900 | 1,700 | 1,000 | 900 | | | | |
| Menominee | 17,000 | 17,500 | 7,900 | 7,600 | 6,500 | 6,600 | 1,400 | 1,000 |
| Ontonagon | 2,600 | 2,800 | 1,250 | 1,100 | 550 | 600 | 700 | 500 |
| Schoolcraft | 1,200 | 1,200 | | | | | | |
| Other counties [2] | 400 | 300 | 650 | 800 | 2,900 | 3,500 | 2,400 | 2,900 |
| **Upper Peninsula** | 54,000 | 54,000 | 22,000 | 21,000 | 13,400 | 13,500 | 8,600 | 7,500 |
| | | | | | | | | |
| Antrim | 5,000 | 5,500 | 1,600 | 1,300 | 1,000 | 800 | 600 | 500 |
| Benzie | 1,200 | 1,200 | | | | | | |
| Charlevoix | 3,500 | 3,200 | 1,250 | 800 | 650 | | 600 | |
| Emmet | 5,100 | 5,100 | 2,100 | 1,800 | 900 | 800 | 1,200 | 1,000 |
| Grand Traverse | 6,100 | 5,500 | 1,900 | 1,500 | 600 | | 1,300 | |
| Kalkaska | 1,000 | 1,300 | | | | | | |
| Leelanau | 4,400 | 4,000 | 550 | 550 | | | | |
| Manistee | 2,200 | 2,100 | 550 | 550 | | | | |
| Missaukee | 22,000 | 22,500 | 9,800 | 10,000 | 9,300 | 9,400 | 500 | 600 |
| Wexford | 3,500 | 3,600 | 1,400 | 1,400 | 900 | 900 | 500 | 500 |
| Other counties [2] | | | 550 | 600 | 850 | 1,700 | 800 | 2,300 |
| **Northwest** | 54,000 | 54,000 | 19,700 | 18,500 | 14,200 | 13,600 | 5,500 | 4,900 |
| | | | | | | | | |
| Alcona | 4,800 | 4,700 | 2,000 | 1,800 | 700 | 600 | 1,300 | 1,200 |
| Alpena | 10,000 | 10,700 | 4,200 | 4,300 | 2,800 | 2,800 | 1,400 | 1,500 |
| Cheboygan | 4,500 | 5,000 | 1,850 | 2,100 | 1,350 | 1,400 | 500 | 700 |
| Iosco | 7,000 | 9,000 | 2,600 | 2,500 | 1,600 | 1,800 | 1,000 | 700 |
| Montmorency | 2,500 | 2,700 | 1,100 | 1,000 | | | | |
| Ogemaw | 16,500 | 15,000 | 6,800 | 6,600 | 5,800 | 5,500 | 1,000 | 1,100 |
| Oscoda | 1,900 | 2,300 | 1,000 | 850 | | | | |
| Otsego | 2,300 | 2,100 | 550 | 650 | | | | |
| Presque Isle | 8,000 | 8,000 | 3,000 | 2,600 | 1,900 | 1,800 | 1,100 | 800 |
| Other counties [2] | 500 | 500 | 100 | 100 | 1,550 | 1,500 | 1,200 | 1,100 |
| **Northeast** | 58,000 | 60,000 | 23,200 | 22,500 | 15,700 | 15,400 | 7,500 | 7,100 |
| | | | | | | | | |
| Lake | 2,200 | 2,700 | 750 | 750 | | | | |
| Mason | 8,500 | 8,600 | 3,450 | 3,050 | | | | |
| Muskegon | 13,900 | 14,500 | 7,200 | 8,300 | 6,700 | 7,700 | 500 | 600 |
| Newaygo | 20,600 | 22,500 | 9,700 | 9,400 | 8,300 | 8,000 | 1,400 | 1,400 |
| Oceana | 9,800 | 9,700 | 3,600 | 3,100 | 2,900 | 2,600 | 700 | 500 |
| Other counties [2] | | | | | 2,800 | 2,700 | 1,400 | 1,100 |
| **West Central** | 55,000 | 58,000 | 24,700 | 24,600 | 20,700 | 21,000 | 4,000 | 3,600 |
| | | | | | | | | |
| Clare | 13,000 | 13,000 | 4,850 | 4,200 | 3,250 | 2,700 | 1,600 | 1,500 |
| Gladwin | 8,000 | 7,000 | 3,150 | 2,800 | 1,550 | 1,300 | 1,600 | 1,500 |
| Gratiot | 24,500 | 25,000 | 9,100 | 8,500 | 7,900 | 7,500 | 1,200 | 1,000 |
| Isabella | 27,500 | 28,000 | 11,500 | 10,500 | 8,900 | 8,200 | 2,600 | 2,300 |
| Mecosta | 16,500 | 16,500 | 6,700 | 6,000 | 4,800 | 4,600 | 1,900 | 1,400 |
| Midland | 4,000 | 4,500 | 1,100 | 1,300 | 600 | 600 | 500 | 700 |
| Montcalm | 21,000 | 21,000 | 12,100 | 11,700 | 10,500 | 10,300 | 1,600 | 1,400 |
| Osceola | 20,500 | 20,000 | 9,000 | 8,000 | 5,500 | 5,300 | 3,500 | 2,700 |
| **Central** | 135,000 | 135,000 | 57,500 | 53,000 | 43,000 | 40,500 | 14,500 | 12,500 |

See footnote(s) at end of table.

--continued

**Cattle: January 1, by county, 2001-2002 [1] (continued)**

| County and district | All cattle and calves | | All cows that have calved | | Milk cows | | Beef cows | |
|---|---|---|---|---|---|---|---|---|
| | 2001 | 2002 | 2001 | 2002 | 2001 | 2002 | 2001 | 2002 |
| | *Head* | *Head* | *Head* | *Head* | *Head* | *Head* | *Head* | *Head* |
| Arenac | 7,700 | 7,000 | 2,700 | 2,300 | | | | |
| Bay | 4,000 | 4,500 | 1,600 | 1,700 | | | | |
| Huron | 68,000 | 71,000 | 14,700 | 16,400 | 14,100 | 15,500 | 600 | 900 |
| Saginaw | 8,500 | 6,000 | 3,200 | 2,900 | | | | |
| Sanilac | 53,000 | 55,000 | 21,700 | 21,300 | 19,800 | 19,300 | 1,900 | 2,000 |
| Tuscola | 18,800 | 16,500 | 7,500 | 6,200 | 5,500 | 4,900 | 2,000 | 1,300 |
| Other counties [2] | | | | | 6,600 | 6,300 | 900 | 600 |
| **East Central** | 160,000 | 160,000 | 51,400 | 50,800 | 46,000 | 46,000 | 5,400 | 4,800 |
| Allegan | 38,000 | 38,000 | 17,000 | 18,000 | 15,200 | 16,600 | 1,800 | 1,400 |
| Berrien | 4,500 | 4,500 | 2,300 | 2,200 | 1,400 | 1,500 | 900 | 700 |
| Cass | 6,500 | 5,500 | 2,500 | 2,000 | 900 | 900 | 1,600 | 1,100 |
| Kalamazoo | 15,000 | 14,500 | 5,600 | 6,100 | 4,700 | 5,600 | 900 | 500 |
| Kent | 26,500 | 26,500 | 11,400 | 12,300 | 9,500 | 10,300 | 1,900 | 2,000 |
| Ottawa | 36,000 | 28,000 | 13,900 | 13,600 | 12,200 | 12,500 | 1,700 | 1,100 |
| Van Buren | 7,500 | 8,000 | 2,800 | 2,300 | 1,600 | 1,600 | 1,200 | 700 |
| **Southwest** | 134,000 | 125,000 | 55,500 | 56,500 | 45,500 | 49,000 | 10,000 | 7,500 |
| Barry | 25,000 | 24,000 | 10,900 | 9,200 | 8,800 | 7,500 | 2,100 | 1,700 |
| Branch | 17,500 | 18,000 | 6,600 | 4,500 | 4,900 | 3,500 | 1,700 | 1,000 |
| Calhoun | 19,000 | 20,000 | 7,200 | 6,900 | 4,900 | 4,400 | 2,300 | 2,500 |
| Clinton | 44,500 | 47,000 | 19,100 | 19,400 | 18,200 | 18,700 | 900 | 700 |
| Eaton | 14,500 | 14,500 | 5,200 | 4,300 | 2,500 | 2,200 | 2,700 | 2,100 |
| Hillsdale | 21,500 | 24,500 | 9,900 | 11,100 | 8,300 | 9,200 | 1,600 | 1,900 |
| Ingham | 18,000 | 16,000 | 7,500 | 6,700 | 5,900 | 5,600 | 1,600 | 1,100 |
| Ionia | 34,000 | 35,000 | 12,900 | 12,700 | 11,000 | 11,000 | 1,900 | 1,700 |
| Jackson | 20,500 | 25,000 | 7,000 | 7,000 | 4,300 | 4,000 | 2,700 | 3,000 |
| St Joseph | 9,000 | 10,000 | 3,700 | 2,900 | 2,400 | 1,900 | 1,300 | 1,000 |
| Shiawassee | 11,500 | 13,000 | 5,500 | 4,800 | 4,300 | 4,000 | 1,200 | 800 |
| **South Central** | 235,000 | 247,000 | 95,500 | 89,500 | 75,500 | 72,000 | 20,000 | 17,500 |
| Genesee | 7,200 | 7,300 | 2,500 | 2,400 | 1,700 | 1,700 | 800 | 700 |
| Lapeer | 20,000 | 22,500 | 7,500 | 6,400 | 5,300 | 4,900 | 2,200 | 1,500 |
| Lenawee | 17,500 | 19,500 | 9,500 | 11,000 | 8,200 | 9,500 | 1,300 | 1,500 |
| Livingston | 10,000 | 9,300 | 4,300 | 3,800 | 3,200 | 2,800 | 1,100 | 1,000 |
| Macomb | 5,500 | 4,500 | 1,000 | 950 | | | | |
| Monroe | 5,700 | 5,800 | 1,200 | 1,000 | 600 | | 600 | |
| Oakland | 2,000 | 1,600 | | | | | | |
| St Clair | 10,000 | 10,500 | 3,650 | 3,200 | 1,850 | 1,800 | 1,800 | 1,400 |
| Washtenaw | 16,500 | 16,000 | 5,200 | 4,600 | 4,200 | 3,800 | 1,000 | 800 |
| Wayne | 600 | | | | | | | |
| Other counties [2] | | | 650 | 250 | 950 | 1,500 | 700 | 700 |
| **Southeast** | 95,000 | 97,000 | 35,500 | 33,600 | 26,000 | 26,000 | 9,500 | 7,600 |
| **Michigan** | 980,000 | 990,000 | 385,000 | 370,000 | 300,000 | 297,000 | 85,000 | 73,000 |

[1] Estimates are not published for counties with less than 500 head.
[2] Not published separately because of insufficient data or to avoid disclosure of individual operations.

**Hogs and pigs: December 1, by county, 2000-2001 [1]**

| County and district | All hogs and pigs | |
|---|---|---|
| | 2000 | 2001 |
| | *Head* | *Head* |
| Chippewa | 900 | 1,100 |
| Menominee | | 600 |
| Other counties [2] | 600 | 400 |
| **Upper Peninsula** | 1,500 | 2,100 |
| Antrim | | 600 |
| Benzie | 1,000 | 1,100 |
| Emmet | | 500 |
| Grand Traverse | 2,900 | 3,000 |
| Kalkaska | 1,850 | 1,300 |
| Manistee | 700 | |
| Missaukee | 1,300 | 1,900 |
| Other counties [2] | 750 | 400 |
| **Northwest** | 8,500 | 8,800 |
| **Northeast** | 1,700 | 1,600 |
| Muskegon | 2,700 | 3,200 |
| Newaygo | 21,000 | 22,500 |
| Oceana | 1,900 | 2,000 |
| Other counties [2] | 700 | 800 |
| **West Central** | 26,300 | 28,500 |
| Clare | 3,600 | |
| Gladwin | 1,900 | 2,100 |
| Gratiot | 33,500 | 41,000 |
| Isabella | 6,600 | 7,500 |
| Mecosta | 15,000 | 14,300 |
| Midland | 2,300 | 3,000 |
| Montcalm | 12,400 | 12,000 |
| Osceola | 700 | |
| Other counties [2] | | 4,100 |
| **Central** | 76,000 | 84,000 |
| Arenac | | 900 |
| Bay | | 500 |
| Huron | 65,500 | 79,000 |
| Saginaw | 8,100 | 4,000 |
| Sanilac | 4,500 | 4,000 |
| Tuscola | 12,000 | 13,600 |
| Other counties [2] | 900 | |
| **East Central** | 91,000 | 102,000 |

| County and district | All hogs and pigs | |
|---|---|---|
| | 2000 | 2001 |
| | *Head* | *Head* |
| Allegan | 135,000 | 160,000 |
| Berrien | 9,000 | 16,000 |
| Cass | 170,000 | 160,000 |
| Kalamazoo | 20,000 | 15,500 |
| Kent | 10,000 | 7,500 |
| Ottawa | 105,000 | 85,000 |
| Van Buren | 31,000 | 26,000 |
| **Southwest** | 480,000 | 470,000 |
| Barry | 13,000 | 10,000 |
| Branch | 68,000 | 67,000 |
| Calhoun | 40,500 | 48,000 |
| Clinton | 12,000 | 11,000 |
| Eaton | 11,000 | 9,000 |
| Hillsdale | 22,500 | 30,000 |
| Ingham | 5,000 | 8,000 |
| Ionia | 23,000 | 20,000 |
| Jackson | 3,500 | 3,000 |
| St Joseph | 28,500 | 21,500 |
| Shiawassee | 3,000 | 2,500 |
| **South Central** | 230,000 | 230,000 |
| Genesee | 2,900 | 2,800 |
| Lapeer | 2,200 | 2,200 |
| Lenawee | 12,000 | 8,000 |
| Livingston | | 500 |
| Macomb | 2,800 | 1,000 |
| Monroe | 5,000 | 7,000 |
| St Clair | 4,800 | 6,200 |
| Washtenaw | 4,700 | 5,000 |
| Other counties [2] | 600 | 300 |
| **Southeast** | 35,000 | 33,000 |
| **Michigan** | 950,000 | 960,000 |

[1] Estimates are not published for counties with less than 500 hogs.
[2] Not published separately because of insufficient data or to avoid disclosure of individual operations.

**Hens and pullets of laying age: December 1, by county, 2000-2001 [1]**

| County and district | Hens and pullets of laying age | | County and district | Hens and pullets of laying age | |
|---|---|---|---|---|---|
| | 2000 | 2001 | | 2000 | 2001 |
| | *Head* | *Head* | | *Head* | *Head* |
| Delta | | 3,000 | Allegan | 2,150,000 | 2,170,000 |
| Houghton | 6,300 | 6,300 | Berrien | 1,000 | 1,000 |
| Menominee | | 1,000 | Cass | 1,000 | 1,000 |
| Other counties [2] | 4,700 | 2,700 | Kalamazoo | 240,000 | |
| **Upper Peninsula** | 11,000 | 13,000 | Kent | | 2,000 |
| | | | Ottawa | 1,683,000 | |
| Charlevoix | 1,100 | | Van Buren | | 56,000 |
| Leelanau | | 1,100 | Other counties [2] | 61,000 | 2,086,000 |
| Other counties [2] | 4,400 | 3,900 | **Southwest** | 4,136,000 | 4,316,000 |
| **Northwest** | 5,500 | 5,000 | | | |
| | | | Barry | 1,800 | |
| Alpena | 1,000 | 1,000 | Branch | 1,000 | |
| Otsego | 1,000 | | Calhoun | 5,500 | 4,000 |
| Other counties [2] | 3,500 | 4,000 | Clinton | 1,100 | |
| **Northeast** | 5,500 | 5,000 | Eaton | 4,500 | 2,500 |
| | | | Hillsdale | | 52,000 |
| **West Central** | 3,000 | 3,000 | Ingham | 4,500 | 3,000 |
| | | | Ionia | | 1,458,000 |
| Clare | | 1,000 | Jackson | 2,200 | 1,000 |
| Gladwin | 2,600 | 3,000 | St Joseph | | 20,000 |
| Gratiot | | 55,000 | Shiawassee | 3,400 | 2,600 |
| Isabella | 1,200 | 1,500 | Other counties [2] | 1,346,000 | 1,900 |
| Mecosta | 2,400 | 2,300 | **South Central** | 1,370,000 | 1,545,000 |
| Midland | 1,800 | 1,900 | | | |
| Montcalm | 1,900 | 1,800 | Genesee | | 2,000 |
| Osceola | 1,100 | 1,500 | Lapeer | 2,500 | 2,700 |
| Other counties [2] | 57,000 | | Lenawee | | 7,000 |
| **Central** | 68,000 | 68,000 | Livingston | 1,400 | 1,400 |
| | | | Macomb | 1,100 | |
| Bay | 1,400 | 1,300 | Monroe | 2,800 | 1,700 |
| Huron | 605,000 | | Oakland | 1,200 | |
| Saginaw | | 1,000 | St Clair | 3,500 | 2,700 |
| Sanilac | 3,200 | 3,400 | Washtenaw | 2,600 | 2,500 |
| Tuscola | 69,000 | 160,000 | Wayne | 1,200 | 1,300 |
| Other counties [2] | 1,400 | 590,300 | Other counties [2] | 9,700 | 1,700 |
| **East Central** | 680,000 | 756,000 | **Southeast** | 26,000 | 23,000 |
| | | | | | |
| | | | **Michgan** | 6,305,000 | 6,734,000 |

[1] Estimates are not published for counties with less than 1,000 hens and pullets of laying age.
[2] Not published separately because of insufficient data or to avoid disclosure of individual operations.

**Dairy: Number of operations and total milk produced, by county, 2000-2001 [1]**

| County and district | 2000 | | 2001 | |
|---|---|---|---|---|
| | Operations | Total milk produced | Operations | Total milk produced |
| | *Number* | *1,000 pounds* | *Number* | *1,000 pounds* |
| Alger | 9 | 6,100 | 9 | 5,900 |
| Baraga | 7 | 8,200 | 5 | 7,600 |
| Chippewa | 20 | 15,000 | 20 | 15,300 |
| Delta | 32 | 29,200 | 29 | 31,500 |
| Dickinson | 10 | 13,500 | 11 | 13,600 |
| Houghton | 9 | | 8 | |
| Iron | 4 | | 3 | |
| Mackinac | 9 | 17,000 | 9 | 16,300 |
| Marquette | 4 | | 4 | |
| Menominee | 80 | 114,000 | 78 | 119,000 |
| Ontonagon | 14 | 9,900 | 12 | 9,800 |
| Schoolcraft | 2 | | 2 | |
| Other counties [2] | | 12,100 | | 6,000 |
| **Upper Peninsula** | 200 | 225,000 | 190 | 225,000 |
| Antrim | 15 | 17,500 | 14 | 13,000 |
| Charlevoix | 10 | 12,400 | 9 | 12,200 |
| Emmet | 13 | 19,800 | 12 | 16,800 |
| Grand Traverse | 11 | 10,200 | 10 | 10,300 |
| Kalkaska | 3 | | 4 | |
| Leelanau | 10 | | 9 | |
| Manistee | 8 | | 8 | |
| Missaukee | 80 | 167,000 | 75 | 190,000 |
| Wexford | 20 | 14,600 | 19 | 15,800 |
| Other counties [2] | | 8,500 | | 11,900 |
| **Northwest** | 170 | 250,000 | 160 | 270,000 |
| Alcona | 10 | 12,100 | 9 | 15,000 |
| Alpena | 45 | 55,000 | 47 | 53,200 |
| Cheboygan | 10 | 24,500 | 10 | 22,200 |
| Iosco | 20 | 34,200 | 21 | 33,400 |
| Montmorency | 13 | 16,500 | 13 | 15,000 |
| Ogemaw | 47 | 110,000 | 44 | 105,000 |
| Oscoda | 20 | | 19 | |
| Otsego | 4 | | 3 | |
| Presque Isle | 26 | 28,500 | 24 | 28,300 |
| Other counties [2] | | 14,200 | | 12,900 |
| **Northeast** | 195 | 295,000 | 190 | 285,000 |
| Lake | 6 | | 5 | |
| Mason | 39 | 49,000 | 37 | 45,000 |
| Muskegon | 32 | | 30 | |
| Newaygo | 105 | 157,000 | 102 | 167,000 |
| Oceana | 38 | 36,300 | 36 | 32,000 |
| Other counties [2] | | 122,700 | | 151,000 |
| **West Central** | 220 | 365,000 | 210 | 395,000 |
| Clare | 52 | 60,700 | 50 | 59,000 |
| Gladwin | 73 | 20,700 | 70 | 19,500 |
| Gratiot | 57 | 179,000 | 53 | 199,000 |
| Isabella | 105 | 161,000 | 98 | 152,000 |
| Mecosta | 116 | 68,000 | 112 | 68,400 |
| Midland | 9 | 8,600 | 7 | 15,100 |
| Montcalm | 118 | 206,000 | 110 | 196,000 |
| Osceola | 70 | 121,000 | 70 | 126,000 |
| **Central** | 600 | 825,000 | 570 | 835,000 |
| Arenac | 25 | 59,300 | 24 | 53,700 |
| Bay | 15 | 18,600 | 15 | 18,700 |
| Huron | 190 | 336,000 | 175 | 374,000 |
| Saginaw | 40 | 55,400 | 37 | 52,100 |
| Sanilac | 270 | 340,000 | 255 | 337,000 |
| Tuscola | 65 | 90,700 | 64 | 89,500 |
| **East Central** | 605 | 900,000 | 570 | 925,000 |
| Allegan | 118 | 311,000 | 115 | 297,000 |
| Berrien | 13 | 41,500 | 13 | 47,400 |
| Cass | 19 | 13,100 | 18 | 13,500 |
| Kalamazoo | 12 | 90,800 | 13 | 105,000 |
| Kent | 76 | 152,000 | 70 | 156,000 |
| Ottawa | 113 | 248,000 | 103 | 237,000 |
| Van Buren | 24 | 23,600 | 23 | 34,100 |
| **Southwest** | 375 | 880,000 | 355 | 890,000 |
| Barry | 53 | 176,000 | 47 | 208,000 |
| Branch | 102 | 66,400 | 96 | 60,100 |
| Calhoun | 65 | 113,000 | 58 | 116,000 |
| Clinton | 98 | 395,000 | 92 | 385,000 |
| Eaton | 50 | 41,500 | 46 | 38,500 |
| Hillsdale | 165 | 137,000 | 175 | 151,000 |
| Ingham | 63 | 108,000 | 56 | 105,000 |
| Ionia | 92 | 206,000 | 85 | 213,000 |
| Jackson | 46 | 98,600 | 43 | 124,000 |
| St Joseph | 52 | 33,000 | 43 | 35,900 |
| Shiawassee | 59 | 75,500 | 49 | 73,500 |
| **South Central** | 845 | 1,450,000 | 790 | 1,510,000 |
| Genesee | 16 | 30,000 | 15 | 28,700 |
| Lapeer | 80 | 89,000 | 75 | 82,900 |
| Lenawee | 53 | 199,000 | 47 | 225,000 |
| Livingston | 30 | 67,000 | 25 | 63,400 |
| Macomb | 15 | 10,300 | 14 | 10,000 |
| Monroe | 8 | 5,600 | 8 | |
| Oakland | 3 | | 3 | |
| St Clair | 36 | 34,400 | 33 | 31,900 |
| Washtenaw | 48 | 78,800 | 45 | 73,500 |
| Wayne | 1 | | | |
| Other counties | | 900 | | 4,600 |
| **Southeast** | 290 | 515,000 | 265 | 520,000 |
| **Michigan** | 3,500 | 5,705,000 | 3,300 | 5,855,000 |

[1] Estimates are not published for counties with 5 or fewer farms or with less than 5 million pounds of annual production. An operation is any place having one or more head on hand at any time during the year.
[2] Not published separately because of insufficient data or to avoid disclosure of individual operations.

**Sheep: January 1, by county, 2001-2002 [1]**

| County and district | All sheep and lambs | |
|---|---|---|
| | 2001 | 2002 |
| | *Head* | *Head* |
| Alger | 600 | |
| Chippewa | 1,100 | 1,200 |
| Other counties [2] | 900 | 1,400 |
| **Upper Peninsula** | 2,600 | 2,600 |
| | | |
| **Northwest** | 2,400 | 2,400 |
| | | |
| Iosco | 500 | 500 |
| Ogemaw | | 550 |
| Other counties [2] | 2,400 | 1,950 |
| **Northeast** | 2,900 | 3,000 |
| | | |
| Lake | 600 | 500 |
| Mason | 600 | 500 |
| Newaygo | 1,200 | |
| Other counties [2] | 300 | 1,700 |
| **West Central** | 2,700 | 2,700 |
| | | |
| Clare | 700 | 800 |
| Gladwin | 1,100 | 1,100 |
| Gratiot | 700 | 700 |
| Isabella | 1,100 | 1,000 |
| Mecosta | 1,900 | |
| Midland | 600 | |
| Montcalm | 700 | 700 |
| Osceola | 1,200 | 1,200 |
| Other counties [2] | | 2,500 |
| **Central** | 8,000 | 8,000 |
| | | |
| Bay | 600 | 500 |
| Sanilac | 600 | 600 |
| Tuscola | 1,300 | |
| Other counties [2] | 800 | 2,200 |
| **East Central** | 3,300 | 3,300 |

| County and district | All sheep and lambs | |
|---|---|---|
| | 2001 | 2002 |
| | *Head* | *Head* |
| Allegan | 1,500 | 1,700 |
| Cass | 1,300 | 1,300 |
| Kalamazoo | 4,700 | 4,800 |
| Kent | | 800 |
| Ottawa | 900 | |
| Van Buren | 1,200 | 1,300 |
| Other counties [2] | 1,300 | 1,100 |
| **Southwest** | 10,900 | 11,000 |
| | | |
| Barry | 1,400 | 1,400 |
| Branch | 1,200 | 1,400 |
| Calhoun | 1,500 | 1,400 |
| Clinton | 1,600 | 1,700 |
| Eaton | 2,500 | 2,300 |
| Hillsdale | 1,200 | 1,100 |
| Ingham | 1,700 | 1,400 |
| Ionia | 800 | 1,000 |
| Jackson | 4,500 | 5,000 |
| St Joseph | 2,000 | 2,100 |
| Shiawassee | 1,000 | 1,200 |
| **South Central** | 19,400 | 20,000 |
| | | |
| Genesee | 1,100 | 1,200 |
| Lapeer | 1,400 | 1,500 |
| Lenawee | 1,400 | 1,600 |
| Livingston | 1,200 | 1,200 |
| Monroe | 1,200 | 1,400 |
| Oakland | 800 | 800 |
| Washtenaw | 11,000 | 10,500 |
| Other counties [2] | 700 | 800 |
| **Southeast** | 18,800 | 19,000 |
| | | |
| **Michigan** | 71,000 | 72,000 |

[1] Estimates are not published for counties with less than 500 sheep.
[2] Not published separately because of insufficient data or to avoid disclosure of individual operations.

# Useful Agriculture Internet Sites

## State and Federal Agencies

| | |
|---|---|
| MDA-Michigan Department of Agriculture | www.michigan.gov/mda |
| MASS-Michigan Agricultural Statistics Service | www.nass.usda.gov/mi |
| USDA-United States Department of Agriculture | www.usda.gov |
| NASS-National Agricultural Statistics Service | www.usda.gov/nass |
| AMS-Agricultural Marketing Service, Market News Service | www.ams.usda.gov/marketnews.htm |
| APHIS-Animal and Plant Health Inspection Service | www.aphis.usda.gov |
| ERS-Economic Research Service | www.ers.usda.gov |
| FSA-Farm Service Agency | www.fsa.usda.gov |
| NRCS-National Resources Conservation Service | www.nrcs.usda.gov |
| RD-Rural Development | www.rurdev.usda.gov |
| MSU Extension | www.msue.msu.edu |

## Commodity Groups

| | |
|---|---|
| Apples-Michigan Apple Committee | www.michiganapples.com |
| Asparagus-Michigan Asparagus Advisory Board | www.asparagus.com |
| Bison-Michigan Bison Association | www.michiganbison.com |
| Blueberries-Michigan Blueberry Growers Association | www.blueberries.com |
| Cattle-Michigan Beef Industry Commission | www.mibeef.org |
| Celery-Michigan Celery Promotion Cooperative | www.michigancelery.com |
| Cherries-Cherry Industry Administrative Board (CIAB) | www.cherryboard.org |
| Cherries-Cherry Marketing Institute | www.cherrymkt.org |
| Christmas Trees-Michigan Christmas Tree Association | www.mcta.org |
| Corn-Michigan Corn Growers Association | www.micorn.org |
| Dairy-Michigan Milk Producers Association | www.mimilk.com |
| Dairy-United Dairy Industry of MI | www.udim.org |
| Dry Beans-Michigan Bean Commission | www.michiganbean.org |
| Dry Beans-Michigan Bean Shippers / Agri-Business Association | www.miagbiz.org |
| Elk and Deer-Michigan Elk and Deer Breeders Association | www.michigandeerbreeders.com |
| Floriculture-Michigan Floral Association | www.michiganfloral.org |
| Floriculture-Allied Florist Association of Metro Detroit | www.alliedflorist.com |
| Grapes-Michigan Grape and Wine Industry Council | www.michiganwines.com |
| Horses-Michigan Horse Council | www.michiganhorsecouncil.com |
| Nursery-Michigan Nursery & Landscape Association | www.mnla.org |
| Pork-National Pork Board and Pork Producers Council | www.nppc.org |
| Potatoes-Michigan Potato Industry Commission | www.mipotato.com |
| Soybeans-Michigan Soybean Promotion Committee | www.michigansoybean.org |
| Turfgrass-Michigan Turfgrass Association | www.michiganturfgrass.org |
| Turkeys-Michigan Turkey Producers | www.miturkey.com |

## Other Related Sites

| | |
|---|---|
| Implementation Working Group-IWG | www.fqpa-iwg.org. |
| American Farm Bureau Federation | www.fb.org |
| Michigan Farm Bureau | www.michiganfarmbureau.com |
| Michigan Integrated Food and Farming Systems on-line directory | www.miffsmarketline.org |
| Michigan Bovine TB Eradication Project | www.bovinetb.com |
| MSU Agriculture Weather Office | www.agweather.geo.msu.edu |

# INTERNET ACCESS

Reports, data products, and services published by Michigan Agricultural Statistics Service, Michigan Department of Agriculture, and National Agricultural Statistics Service of the United States Department of Agriculture are available on the Worldwide Web. There is no charge for connecting to these Internet addresses:

- **Michigan Department of Agriculture (MDA)**

  **MDA** home page at: **http://www.michigan.gov/mda**

- **Michigan Agricultural Statistics Service (MASS)**

  **MASS** home page at: **http://www.nass.usda.gov/mi**

  Under the **MASS** home page you will find up-to-date data such as Crop-Weather releases, press releases, *Agriculture Across Michigan*, and county estimates.

- **National Agricultural Statistics Service (NASS)**

  **NASS** home page at: **http://www.usda.gov/nass**

You can access national releases, 1997 Census of Agriculture data, and home pages of **NASS** state offices including Michigan from this web site. ***Michigan Crop Weather*** and national releases by free e-mail subscription are available from this site.

## AUTOFAX ACCESS

NASSFax service is available for some reports from your fax machine. Please call 202-720-2000, using the handset attached to your fax. Respond to the voice prompts.

## PRINTED REPORTS OR DATA PRODUCTS

CALL OUR TOLL-FREE ORDER DESK: 1-800-999-6779 (U.S. and Canada)
Other areas, please call l-703-834-0125 FAX: 1-703-834-0110
(Visa, MasterCard, check, or money order acceptable for payment).

## ASSISTANCE

For assistance or questions regarding Michigan agriculture, call 1-800-453-7501. Further information about NASS or its products or services can be obtained by contacting the Agricultural Statistics HOTLINE at 1-800-727-9540, 7:30 a.m. to 4:30 p.m. ET or e-mail: nass@nass.usda.gov.

NASS
FACT FINDERS FOR AGRICULTURE
UNITED STATES DEPARTMENT OF AGRICULTURE
in cooperation with the
Michigan Department of Agriculture

Michigan Agricultural Statistics Service
P.O. Box 26248
Lansing, Michigan 48909-6248

Phone: (517) 324-5300
Fax: (517) 324-5299
E-mail: nass-mi@nass.usda.gov
Web: www.usda.gov/nass

# Subscription Form

Below is a list of reports published by the Michigan Agricultural Statistics Service. To subscribe to any of these reports, please check your choice(s) and return to the address at right.

**Michigan Agricultural Statistics Service**
**P.O. Box 26248**
**Lansing, Michigan 48909-6248**

David D. Kleweno
State Statistician

All publications are also available **free** on the Internet. See inside back cover for details.

☐ 050 ***Agriculture Across Michigan***: A four page newsletter, reporting the latest Michigan agricultural statistics. Issued monthly.

☐ 053 ***Crop Weather***: A report of crop condition, progress, growth and development, plus temperature and rainfall data. Issued weekly, May through November.

☐ 060 ***Michigan Agricultural Statistics Bulletin (2001-2002)***: An annual summary of Michigan crop, livestock, and price statistics, including county estimates of livestock and major crops. Issued Summer, 2002.

MICHIGAN ROTATIONAL SURVEY BULLETINS:

☐ 030 ***Fruit (2000-2001)***: A summary of Michigan fruit acreage, age and number of trees, varieties, etc.

☐ 020 ***Nursery and Christmas Trees (1999-2000)***: A summary of Michigan nursery and Christmas tree statistics.

☐ 051 ***Vegetables (2001-2002)***: A summary of Michigan vegetable statistics. Issued Summer, 2002.

**Send to:**

Name:_____

Company:_____

Street:_____

City:_____ State:_____ Zip:_____

Please check the category that best describes your business.

☐ 1. Farm Operator ☐ 4 University
☐ 2. Agribusiness ☐ 5. Other:_____
☐ 3. Government (Federal, State, County)

NASS
FACT FINDERS FOR AGRICULTURE
UNITED STATES DEPARTMENT OF AGRICULTURE

Michigan Agricultural Statistics Service
P. O. Box 26248
Lansing, Michigan 48909-6248

in cooperation with the
Michigan Department of Agriculture



**OFFICIAL BUSINESS**

2002 Census of Agriculture
coming in December