Fall 1998

- Fantasy facts and fall colors
- Engler unveils campaign platform and priorities
- Conservation buffers offer win-win opportunities
- Muskegon County officials consider cranberries
Food safety — Real science being displaced by "political science"

For more than 30 years, the agricultural community lived with the threat of losing vital crop protectants due to an unscientific and outdated law commonly known as the Delaney Clause, which failed to consider both benefits and risk in evaluating certain agricultural chemicals.

The agriculture community was relieved when this law was replaced two years ago. The new Food Quality Protection Act (FQPA), if implemented as passed by Congress, requires more scientific review, faster processing of data and the recognition of food-producing benefits from pesticides, and more importantly, greater attention to food safety.

When Congress passed the act in 1996, it did not intend to put American farmers out of business or increase consumer food costs. Unfortunately, the Environmental Protection Agency’s interpretation and implementations of the regulations could very well do just that.

Americans spend 10.9 percent of their disposable income on food. That’s among the lowest in the world. The efficiency of America’s agriculture system is a big reason for this low percentage. But this will all change once America’s food producers lose use of vital crop protectants. Farmers, in their attempt to protect crops from infestation, often have nothing else to turn to.

More importantly, advances made in integrated pest management, which actually reduces the dependence and use of pesticides, will be lost under EPA’s current implementation plan.

The most frustrating aspect of this issue is that the application of good data and sound science to the provisions of the FQPA would prove our crop protectants are indeed safe. But, so far, the EPA is unwilling to use either. The provisions of FQPA are not being enacted because of science. The agricultural chemicals the EPA wants to abolish pose no realistic scientific threat to human health as they are now being used.

Politics — not sound science — is EPA’s motivation.

EPA believes the targeted crop protectants cause cancer. But medical statistics reveal that every type of cancer — with the exception of lung and breast cancer — is declining. The American Cancer Society and a number of other organizations trumpet the increase in fruit and vegetable consumption as the reason for the decline in cancer cases.

This, perhaps, is the most ironic aspect of EPA’s implementation of FQPA. Should it ban essential crop protectants because of unfounded health fears, EPA will create a shortage of fruits and vegetables, the very products that have proved to prevent cancer and other diseases.

People with less scientific training than you or me are deciding the future of America’s food supply. They are making assumptions few real scientists would use to make sweeping reductions in our selection of effective and safe crop protection tools.

Career bureaucrats also err by arbitrarily making their decisions without providing farmers the opportunity to share our first-hand knowledge and experience. Farm Bureau is urging EPA to base their decisions on actual use data, rather than worst case assumptions, when making determinations to restrict or cancel pesticides. We do not apply pesticides at the maximum dosage rates or as frequently as the label will allow.

Bill Spencer is a citrus producer from Yuma, Ariz. He is a member of the Tolerance Reassessment Advisory Committee (TRAC), which was formed by Vice President Al Gore to review and comment on the Environmental Protection Agency’s implementation of the Food Quality Act. Ask him how serious the threat to our food supply and he’ll warn you not to underestimate the potential downside of EPA’s reckless approach.

“In FQPA, the EPA wields a quiet, yet powerful weapon that could impact our everyday lives. In the short term, farmers stand to lose the most. But in the long haul, each and every American will end up paying a very steep price,” he said.

I couldn’t agree more. Let your congressmen know that real science, not political science, is needed to protect our food supply.

Sincerely,

Jack Laurie, President

State Farm Bureau reaches membership target, goal

This marks the third year in a row that Michigan Farm Bureau has hit its membership target by gaining in the number of regular (farmer) members. The 68 county Farm Bureau organizations worked to leave the state with 45,035 regular members.

Michigan Farm Bureau’s membership has grown 11 consecutive years. The organization reached its goal with 169,202 members.

According to Rob Anderson, MFB membership manager, 53 county Farm Bureaus made their membership targets by increasing the number of farmer members from last year. Membership goal — overall increase — was reached by 47 counties.
Fantasy, facts and fall color 4

Autumn colors have been celebrated in literature, legends, songs and works of art since ancient times.

Engler unveils campaign platform and priorities 9

Gov. John Engler unveiled his campaign platform, and issues important to agriculture make the list.

Conservation buffers offer win-win opportunities 15

Eight years ago, massive rainfall caused a great deal of erosion on the hilly landscape of the McElroy farm, in Hillsdale County. The Soil Conservation District, now the Natural Resources Conservation Service, provided some answers on how to cut his losses and be more environmentally conscious with the introduction of control basins on his property.

Muskogon County officials consider cranberries 18

Land that’s no longer needed for spreading county wastewater could be turned into a cranberry farm if agriculture industry representatives have their way.
Michiganders are blessed with beautiful fall colors, all due to the physics of sunlight striking pigments in the leaves.

Autumn colors have been celebrated in literature, legends, songs and works of art since ancient times. Legends include the mythical Jack Frost who supposedly brings reds and purples to the forest by pinching the leaves with his icy fingers. The hues of yellow, gold and brown are mixed on his paint palette and applied with quick, broad strokes of his brush as he silently moves among the trees to decorate them.

According to an Indian legend, celestial hunters kill a great bear in the autumn sky and, its blood dripping on the forests, change many leaves to red. Other trees are turned yellow by the fat that splatters out of the kettle as the hunters cook the meat.

Although we still tell these fictional stories today, we are able to logically explain the how and why of fall color. The explanation involves the geographic distribution and growth habit of trees, physics of light and color, plant pigments, the physiology and anatomy of leaves, and the influence of weather conditions as the seasons change.

Geographic distribution and tree growth patterns

Only a few places in the world have the combination of tree species and climatic conditions necessary for vivid fall foliage. It is our deciduous forests and trees with their many broad leaves that change color almost in unison and display the most noticeable fall color.

Evergreen species also develop fall coloration, but the color changes are slow and gradual. Many homeowners become unnecessarily alarmed in the autumn when the interior needles of their pines, spruces, and firs turn color. They mistakenly interpret this as a disease problem, not realizing that even evergreens seasonally shed older leaves. The eastern United States and southeastern Canada have weather conditions and the deciduous trees favorable for brilliant fall color. A few places scattered in western North America, especially in the mountains, have bright fall color, too.

Leaf pigments and physiological changes

The various leaf colors we see are due to the physics of sunlight striking pigments in the leaves. For an explanation of fall color, four broad categories of pigments are recognized: chlorophyll, carotenoids, anthocyanins and tannins. It is these pigments that also account for the array of color in flowers.

During spring and summer, the leaves serve as the principal site for the photosynthetic process in which carbon dioxide and water are transformed into the carbohydrates necessary for tree growth. This food-making process takes place in the leaf in numerous cells containing the pigment chlorophyll, which gives the leaf its green color. As the days get shorter and temperatures get cooler in the fall, there is a decline in synthesis of new chlorophyll. The green color disappears and the rate of photosynthesis declines. The trees become very frugal and even more efficient by pulling nutrients such as nitrogen and phosphorus into twigs and branches to be stored for the winter, further enhancing the loss of chlorophyll.

Along with chlorophyll, leaves also contain yellow or orange carotenoid pigments. This is the same pigment that gives the carrot its familiar color and also lends color to eyes, feathers, and scales of certain animals. Most of the year these yellowish colors are masked in leaves by the greater amount of green chlorophyll. It is the unmasking of the carotenoids that accounts for the yellow and golden color of Norway maple, yellow poplar, sycamore, birch, hickory ash and many other species of trees. The golden yellow produced in some leaves, such as those of beeches, results from the presence of tannins along with the yellow carotenoid pigments.

The anthocyanin pigments responsible for the pink, red and purple leaves of sugar maple, sassafras, sumac, white and scarlet oak, shadbush, winged euonymus and many other woody plants are formed by

Continued on next page
What should I do with all these leaves?

Sure, fall leaves are beautiful. Until you have to rake them. And rake them.

Unless you let the leaves sit on your lawn and smother your grass, you can’t avoid paying for the autumnal color show with hours of back-aching work. But you do have several ways to dispose of them while improving your garden soil, according to Ohio State University specialists.

If you are digging new flower or vegetable beds, double-dig the area and add leaves to increase the organic matter. Usually you would prepare soil to a depth of one spade, or about 12 inches deep. When you double dig, you go down the depth of about two spades, without mixing up the two different layers of soil.

To double dig, remove one trench of soil one spade deep and about 3 feet wide. Put this soil in a wheelbarrow. Dig down another 12 inches to loosen the subsoil. Dig another trench, and dump that soil into the trench you’ve already made. Do the same thing to the subsoil. When you get to the last trench, dump in the soil you put aside from the first trench.

Composting eliminates the largest quantity of leaves, said Joe Heimlich, an environmental specialist at Ohio State University. The process mimics nature’s built-in decay process and turns your lawn and kitchen wastes into a valuable source of nitrogen and carbon for your garden. RL

Celebrate autumn colors

Continued from previous page

reactions between various sugars and complex compounds called anthocyanins. A mixture of red anthocyanin pigment with yellow carotene often gives a bright orange color as seen in some species of maples.

Good soil fertility can enhance the intensity of red color by affecting carbohydrate production during the growing season. For instance, pin oaks that have received heavy applications of nitrogenous fertilizers will have a much deeper red color than those grown in poor soils without fertilizer.

Among the most important environmental factors that influence the intensity of color due to anthocyanins are light intensity, temperature and water supply. Bright light favors red color, and anthocyanin pigments usually develop only in leaves that are exposed to the light. If one leaf is shaded by another, the lower leaf usually does not form the red pigments at all. The degree of color can vary from tree to tree, as well, since trees exposed to the sun may turn red while others in the shade may be yellow. A single tree may have branches with different-colored leaves.

The best weather conditions

In some years, autumn color is more pronounced than in others. The shades of yellow and brown always appear, but it is the brilliant reds and purples mixed with the yellows that impart the awesome beauty of fall landscapes.

Fall weather conditions favoring formation of bright red autumn color are warm, sunny days followed by cool nights with temperatures below 45°F, but not freezing. Some photosynthesis still occurs in the leaves during the daytime even while the chlorophyll content is declining. Rainy or cloudy days without much light occurring near the time of peak coloration will actually decrease the intensity of fall colors by limiting photosynthesis.

There is an old wive’s tale that says rainy days wash the color out of leaves. While that is not true, these conditions reduce light intensity, and heavy rains and high winds can sweep the leaves off the trees early. RL

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MICHIGAN FARM BUREAU THE STATE'S LARGEST GENERAL FARM ORGANIZATION
Farming has been a way of life for both Judy and her husband, Jerry.

by Jennifer Vincent

She shrugs her shoulders and simply says, "I guess it's our turn." Michigan Farm Bureau board member Judy Emmons and her husband, Jerry, haven't had a lot of rain this year. The sunny skies have provided the warmth, but without the rain, the corn is curling and the bottom leaves are brown.

"That's how farming is," she says. "It's pretty stressful—the one thing that controls production the most is the one thing we have no control over."

Emmons has been a member of the Farm Bureau board since 1994, but farming has been a way of life for both her and her husband. "We both grew up on farms," she said, "so we know it's all about taking the good with the bad."

The Emmons live well north of I-96, which has served largely as the divider between rain and no rain. "You can drive south of I-96 and the corn looks great," she said. "Go a little farther and there's water in the ditches."

Together with one full-time employee, they farm about 600 acres on the outskirts of a little town in Montcalm County named Sheridan. They raise most of the feed for their 80-plus head of primarily registered holsteins. "I'm sure we'll end up buying some of our feed this year," she said.

Emmons' grandfather, Roy Wilson, started the holstein herd back in 1915. "We live on a typical family farm, although it's more atypical now."

Judy and Jerry Emmons have raised their three children, Heather, 28, Chad, 25, and Tyler, 17, in the home where Jerry grew up. "It's been a family business, and we all work together," she said. "I think it's good for the kids to see what you're doing and to be a part of that. They learn what provides for them. I think farm kids, in general, have a good work ethic."

Emmons took a seat on the Farm Bureau board because she wanted to play a participating role—the same reason she is the president of the Central Montcalm Board of Education. "I think we all have the responsibility to be involved with something," she said. "Don't give it just lip service. People shouldn't criticize if they're not participating and assuming a responsibility."

The Michigan Farm Bureau is the voice for all farmers, although Emmons says it's getting more difficult to represent them all. "It's big vs. little and medium-size farms," she said. "Farm Bureau needs to continue to represent them all and be sensitive to everybody's needs."

Regulations and the push for development of large parcels of farmland continue to plague the farming industry, she says. "You gain one step, like with the estate tax, but take three back," she explained. "We have an increasing number of farmers in their 60s and 70s who are thinking about retirement. We need to be able to offer them an alternative to selling their property for development. Those are the types of issues Farm Bureau is working on."

Educating new legislators on farming issues and concerns will also be a major task of the Farm Bureau after the November General Election. "Because of term limits, we have so few connected to agriculture in office," she said. "We need to get the message out and help them understand. The Farm Bureau is very well run, and members should rest assured that they are in good hands. Members should be proud of the staff they have working for them. They are very responsive to the needs of the members."

When Emmons isn't busy on the farm or at the school, she enjoys teaching piano lessons and is the organist at Faith Lutheran Church. "And, with my sister and a couple of friends, we like to do a little singing," she added. RL

Member Profile

JUDY EMMONS
- Home: Sheridan in Montcalm County
- Family: Husband, Jerry, and three children, Heather, 28, Chad, 25, and Tyler, 17
- Farm: 600 acres, including corn, alfalfa, hay, wheat and oats, and a dairy operation that includes about 80 registered holsteins
- Farm Bureau Involvement: Michigan Farm Bureau board member since 1994, Audit Committee and Annual Meeting Committee member; also works on the Montcalm County Farm Bureau Policy Development Committee
These candidates have been designated as “Friends of Agriculture” by the Michigan Farm Bureau AgriPac Committee. The designation constitutes an election endorsement for the Nov. 3 General Election.

### U.S. House of Representatives

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### State Senate (cont.)

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### Supreme Court (nonpartisan)

- Jeffrey Collins
- Maura Corrigan
- Clifford Taylor (Incumbent)
- Candace Miller (R-Harrison Township)
- John Smietanka (R-Ada)
- Gary Wolfram (R-Hillsdale)
- Dee Cook (R-Greenville)
- Dave Porteous (R-Red City)
- David Brandon (R-Plymouth)
- Jessie Dalman (R-Holland)

### Secretary of State
- Jerry Vander Roest (R-Galesburg)
- Judith Scr Iton)
- Paul DeWeese (R-Ishpeming)
- Gene DeRossett (R-Manchester)
- Doug Spade (R-Detroit)
- Steve Vear (R-Jonesville)
- Cameron Brown (R-Sturgis)
- Charles Perricone (R-Kalamazoo)
- Jerry Vander Roest (R-Galesburg)
- Frank Bisbee (R-Jackson)
- Mickey Montimer (R-Horton)
- Judith Scriver (R-Brant)
- Paul DeWeese (R-Williamsburg)
- Lingg Brewer (D-Holt)
- Susan Tabor (R-Lansing)
- Mark Jansen (R-Grand Rapids)

### Governor
- John Engler (R-Mt. Pleasant)

### Attorney General
- John Smietanka (R-Ada)

### State Board of Education
- Gary Wolfram (R-Hillsdale)

### Michigan State University Board of Trustees
- Dee Cook (R-Greenville)
- Dave Porteous (R-Red City)

### University of Michigan Regents
- David Brandon (R-Plymouth)
- Jessie Dalman (R-Holland)

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<td>Willis Bullard, Jr. (R-Highland)</td>
</tr>
<tr>
<td>13</td>
<td>Beverly Hammett (R-Temperance)</td>
</tr>
<tr>
<td>14</td>
<td>Alma Wheeler Smith (D-South Lyon)</td>
</tr>
<tr>
<td>15</td>
<td>Philip Hoffman (R-Horton)</td>
</tr>
</tbody>
</table>

### State Court of Appeals (nonpartisan)

<table>
<thead>
<tr>
<th>District</th>
<th>Candidate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Daniel Ryan (incumbent)</td>
</tr>
<tr>
<td>2</td>
<td>Michael Talbot (incumbent)</td>
</tr>
<tr>
<td>3</td>
<td>David Sawyer (incumbent)</td>
</tr>
<tr>
<td>4</td>
<td>Stephen Markman (incumbent)</td>
</tr>
</tbody>
</table>

### State Board of Education

- Gary Wolfram (R-Hillsdale)
- Laura Toy (R-Livonia)
- Bruce Patterson (R-Canton)
- William Callahan (R-St. Clair Shores)
- Sue Roccia (R-Sterling Heights)
- Quinnie Cudd (R-Mount Clemens)
- Alan Sanborn (R-Richmond Township)
- Janet Kukuk (R-Macomb)
- Nancy Cassis (R-Novi)
- Patricia Godchaux (R-Birmingham)
- Hubert Price, Jr. (D-Pontiac)
- Mike Bishop (R-Rochester)
- Ruth Johnson (R-Holy)
- Sandra Hill (R-Montrose)
- Vera Rison (D-Mt. Morris)
- Tom Wright (R-Lennon)
- Julie Knight (R-Dexter)
- Elizabeth Brater (D-Ann Arbor)
- Gene DeRossett (R-Manchester)
- Doug Spade (D-Adrian)
- Steve Vear (R-Jonesville)
- Cameron Brown (R-Sturgis)
- Charles Perricone (R-Kalamazoo)
- Jerry Vander Roest (R-Galesburg)
- Frank Bisbee (R-Jackson)
- Mickey Montimer (R-Horton)
- Judith Scriver (R-Brant)
- Paul DeWeese (R-Williamsburg)
- Lingg Brewer (D-Holt)
- Susan Tabor (R-Lansing)
- Mark Jansen (R-Grand Rapids)
Agriculture issues on the agenda

Gov. John Engler unveiled his campaign platform this fall, and issues important to agriculture make the list.

Engler said preserving Michigan farmland is one platform priority, which may be achieved through a state Farmland Preservation Trust Fund. He pointed to Purchase of Development Rights (PDR) programs as a solution.

Exactly how PDR programs would be funded is yet to be determined, the governor explained. "We haven't laid that out yet," he said. "I guess we will look at all the different options."

Engler said before funding is determined, another answer is needed first. "This is proving to be a very tricky question and that's, how do we decide what farmland should be addressed."

Solving the state's bovine tuberculosis problem is another part of the platform. "Fortunately, the testing continues to be very positive," Engler said.

Only one cattle herd has been quarantined due to the disease.

But as testing of livestock in northeast Michigan continues, Engler conceded that farmers may need to be better compensated should animals need to be sacrificed. "The indemnity issue clearly needs to be addressed," he said. "Those limits were set a long time ago."

The Michigan Commission on Agriculture has proposed a plan to change the caps farmers may be paid for indemnity of sacrificed livestock.

Sen. Dick Posthumus, Engler's running mate and nominee for lieutenant governor, ranked the platform's agriculture priorities during a visit to Zeeland Farm Services (ZFS).

"Number one is going to be preserving and expanding our processing capacities in this state," Posthumus said, pointing to ZFS as a prime example of how processors can boost state agriculture.

Preserving farmland and funding Michigan State University animal and plant agriculture research also topped the senator's list.

The Engler-Posthumus platform also includes plans to cut taxes, improve schools, fight crime, fix roads and strengthen families.
The Best Farmer-Owned Brand
On The Face Of The Earth
Is Now Homegrown In Michigan

Your Michigan Farm Bureau and Farmland Industries are working together to provide products and services throughout Michigan. From agricultural inputs to consumer food products, Farmland is a complete farm-to-table system. As the largest farmer-owned cooperative in North America, we look forward to getting to know you and helping to meet your needs with petroleum, feed, crop production and other fine Farmland products and services.

The Farmland System is owned by about 600,000 farm families like Randy and Mary Wilson of Round Lake, MN.

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Farm Bureau Life: One of America's best

What's better than making David Letterman's top ten list? If you're a life insurance company, the answer is Ward's Top 50 list. Farm Bureau Life has earned a spot on this year's list of the 50 most outstanding life insurers in America, prepared annually by Ward Financial Group.

This is the seventh straight year that Farm Bureau Life has qualified for the Top 50 list, which recognizes insurance companies that achieve high levels of safety, security and financial performance. "The companies that appear on the list have done the best job of balancing solvency and profitability over the past five years," said John Ward, chairman of Cincinnati-based Ward Financial Group. "The combination of safety, security, and performance sets these top 50 insurers apart from other insurers."

Ward Financial Group, an investment banking firm that analyzes the insurance industry, analyzed 1,433 life and health insurers before naming the 1998 Top 50.

Heating with a wood stove? Do it the safe way

No matter how carefully you install a wood stove, or what kinds of precautions you take, there is always the possibility that something could go wrong. That's why you should have ... • A UL-approved fire extinguisher in the vicinity of (but not right next to) your stove. • A smoke detector or smoke/fire detector near your sleeping quarters, but far enough away from the stove to keep the detector from sounding off in the presence of normal heat radiation or smoke that may result from start-up or refueling. • Portable, folding escape ladders under beds or window sills for emergency use. • An emergency exit plan.

For more information on wood heating safety, visit our Farm Bureau Insurance web site at www.farmbureauinsurance-mi.com, where you can request an electronic copy of Wood Heat: The Safe Way — our guide to the proper installation and use of wood heating appliances.

New for you: Multi-Policy Credit

If you have a homeowners or mobile homeowners policy with us, and you also have a personal auto policy with us, you will receive a credit on your homeowners or mobile homeowners policy at renewal. And after Jan. 1, 1999, you will also receive a credit on your personal auto policy at renewal time.

This is a great time for you to talk with your Farm Bureau Insurance agent about the many features and benefits of our home and automobile insurance products. Remember, we're working to make your future more predictable.

It pays to drive safely ...

Farm Bureau Insurance offers a Safe Driver Credit to customers who have good driving records. We also offer an Accident-Free, Continuous Coverage Credit to customers who have been insured with us for three years or longer and have not been involved in an at-fault accident for three years.

... And to stay with Farm Bureau Insurance

Beginning Jan. 1, 1999, we will offer another benefit to auto insurance customers who have been with us for three years or longer:

If you have qualified for our Safe Driver Credit or our Accident-Free, Continuous Coverage Credit, and, within a three-year period you experience either ...

• One minor civil traffic infraction
  OR
• A single at-fault accident involving a minor civil infraction

... you will not lose the credit.

We're glad to offer these values to you. It's one way for us to thank you for being a loyal customer, driving safely, and working with us to make your future more predictable.
Planning for retirement in the 21st century

The 20th century ushered in a previously unheard-of phenomenon — the concept of retirement. Previously, when life expectancy was relatively short, people generally worked until the day they died. However, with the advent of modern medicine, resulting in increased longevity, living to and enjoying retirement became an expected American dream. As this expectation became more widespread, people often turned to employers for pension benefits and the federal government for Social Security benefits to provide the funds needed for their retirement years.

As the 20th century winds to a close, people are living longer than ever. In fact, today's 65-year-old has a 60 percent chance of living to age 85 and a 41 percent chance of living to age 90. And as planning for retirement takes on increasing importance, many people have begun to wonder if the government will continue to take steps to reduce its Social Security burden to tomorrow's retirees. Certainly, the Social Security Administration itself cautions that Social Security is not designed to meet all of a retiree's financial needs in his or her retirement years. Employees who may have experienced company mergers, downsizings and pension plan revisions often worry about saving for retirement, but don't know where to start.

With all this in mind, you will probably agree that retirement in the 21st century will not resemble that of the 20th century. The burden and responsibility of saving for retirement are rapidly shifting to the individual. So it is essential for tomorrow's retirees to plan realistically and build their personal savings to provide for the retirement they desire. With proper planning, retirees have the freedom to choose how to enjoy their golden years; without proper planning, they will probably have to continue working.

A simple, but effective, tool to use in retirement planning is the concept of the three-legged retirement stool. The first leg is Social Security payments, and the second leg is employer-provided pension plans. The third, and by far most important, leg is the money you set aside yourself. To be sure your stool doesn't wobble, it's important to determine how much money you'll need during retirement and where you should place your money. It's also important to periodically reevaluate your plan. Of course, the most important step is to commit to consistently setting money aside. How much will you need?

You may decide you need $50,000 or 100 percent of your preretirement income. Remember, your retirement income may come from a combination of sources, such as Social Security benefits, pensions, and your own savings. Your Farm Bureau Insurance agent can help you submit a Request for a Personal Earnings and Benefit Estimate Statement to the Social Security Administration. It will help you determine your estimated status for Social Security benefits.

If you have any company pension plans, check with the company's benefits administrator for an idea of what pension benefits you can expect. For your optimum retirement, any shortfalls will have to come from your personal funds. How should you invest?

There is no one right place to put all your money. It's a good idea to put retirement money into various investments. What's important is to choose the types of investments with which you are comfortable and which will best help you reach your retirement funding goals. Fortunately, today you have all kinds of choices.

One key to retirement savings success is to avoid paying taxes for as long as possible. By deferring or even eliminating taxes, you can make your retirement nest egg grow by additional tens or hundreds of thousands of dollars by the time you retire. Your Farm Bureau Insurance agent can offer you a variety of tax-deferred retirement planning programs, including those listed below. For a more in-depth explanation of the benefits and restrictions of each plan, please talk with your agent.

- **IRA:** With a traditional IRA (Individual Retirement Annuity), you can contribute up to $2,000 each year. All earnings are tax-deferred until they are distributed, and you may even be able to defer taxation on your contribution.

- **Roth IRAs** are a new retirement planning tool. Although contributions of up to $2,000 annually are not income-tax deductible, the earnings grow income-tax free. That means you won't have to pay any taxes on distributions taken after age 59-1/2.

- **Spousal IRAs** now have higher limits. Effective in 1998, full-time homemakers and stay-at-home spouses may now be eligible for an annual contribution of up to $2,000.

- **SEP-IRAs,** or Simplified Employee Pensions, are attractive alternatives for self-employed individuals or small-business owners with employees. For 1998, SEPs have a contribution limitation of up to 15 percent of income for the first $160,000 of income.

- **SIMPLE IRAs** are another plan now available to businesses with 100 or fewer employees. Similar to 401(k) plans, SIMPLE IRAs offer a savings incentive match to employees.

- **KEOGHS** are often a good choice for self-employed individuals, because of higher contribution limits.

- **Non-Qualified Fixed Annuities:** After you've maxed out your employer plans and IRAs, a non-qualified fixed annuity provides an element of certainty as well as earnings that accumulate tax-deferred — so you can earn and keep more than with comparable taxable investments.

**Where should you start?**

To save for retirement, you need two things — time and money. The more time you have until retirement, the less money you'll need to regularly save. The later you start, the more money you'll need to set aside. For instance, assuming a hypothetical 7 percent tax-deferred return and a personal fund goal of $500,000 at age 65, a 25-year-old would have to set aside $190 each month, whereas a 55-year-old would have to set aside $2,889.

There's no doubt about it: Procrastination is your biggest enemy when it comes to retirement planning. You really can't afford to wait to start saving for retirement. If you are on track, congratulations! If you haven't started saving for retirement, shouldn't you start today?
Complete this worksheet for a quick estimate of how much you need to save for the retirement that's right for you. Bring it to your Farm Bureau Insurance agent, who will work with you to help you meet your retirement goals.

1. How much annual income will you want in retirement?
   (Tip: Figure 70% of your current AGI to maintain your current standard of living.)

2. Subtract the income you expect to receive annually from:
   - Social Security (Tip: If you don't have your personalized estimate and make under $25,000, enter $8,000; between $25,000-$40,000, enter $12,000; over $40,000, enter $14,500.)
   - Employer pension (in today's dollars)
   - Part-time income (optional)
   - Other
   This is the amount you'll need to make up for each retirement year:

3. To determine the amount you'll need to save, multiply the amount you need to make up (from part 2 above) by the factor below.

<table>
<thead>
<tr>
<th>Age You Expect to Retire</th>
<th>Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>55</td>
<td>21.0</td>
</tr>
<tr>
<td>60</td>
<td>18.9</td>
</tr>
<tr>
<td>65</td>
<td>16.4</td>
</tr>
<tr>
<td>70</td>
<td>13.6</td>
</tr>
</tbody>
</table>

(Assumes a constant real rate of return of 3 percent after inflation, life expectancy to age 87, and Social Security income beginning at age 65.)

4. If you expect to retire before age 65, multiply your Social Security benefit (from part 2 above) by the factor below.

<table>
<thead>
<tr>
<th>Age You Expect to Retire</th>
<th>Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>55</td>
<td>8.8</td>
</tr>
<tr>
<td>60</td>
<td>4.7</td>
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</table>

5. Add up retirement savings to date.

<table>
<thead>
<tr>
<th></th>
<th>$</th>
</tr>
</thead>
<tbody>
<tr>
<td>401(k)</td>
<td>$</td>
</tr>
<tr>
<td>IRAs</td>
<td>+$</td>
</tr>
<tr>
<td>Other</td>
<td>+$</td>
</tr>
<tr>
<td>Total</td>
<td>=$</td>
</tr>
</tbody>
</table>

6. Multiply your total retirement savings to date (from part 5) by the factor below.

<table>
<thead>
<tr>
<th>Expected Years Until Retirement</th>
<th>Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>1.3</td>
</tr>
<tr>
<td>15</td>
<td>1.6</td>
</tr>
<tr>
<td>20</td>
<td>1.8</td>
</tr>
<tr>
<td>25</td>
<td>2.1</td>
</tr>
<tr>
<td>30</td>
<td>2.4</td>
</tr>
<tr>
<td>35</td>
<td>2.8</td>
</tr>
<tr>
<td>40</td>
<td>3.3</td>
</tr>
</tbody>
</table>

7. This is how much you'll need to save for retirement:

8. To determine the annual amount you'll need to save, multiply the amount on line 7 by the factor below.

<table>
<thead>
<tr>
<th>Expected Years Until Retirement</th>
<th>Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
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<tr>
<td>35</td>
<td>.016</td>
</tr>
<tr>
<td>40</td>
<td>.013</td>
</tr>
</tbody>
</table>
At your service: Your Farm Bureau Insurance agent, quality products

Your Farm Bureau Insurance agent takes the time to get to know you and your insurance needs — so that your insurance will be a perfect fit.

You can count on your agent to do the best possible job for you and your family. Call for a confidential review of your insurance needs and answers to your insurance questions.

To protect your family, home, life, business, retirement, possessions and everything else you value, talk to your agent about...

- Homeowners Insurance
- Non-smoker's discount
- Protective devices discount
- 25 percent discount for ages 55 and older.
- Auto insurance
- Safe driver discount
- Accident-Free, Continuous Coverage Credit
- Business insurance
- Recreational vehicle insurance
- Workers' compensation insurance
- Disability insurance
- Universal Life insurance
- IRAs
- Tax-deferred annuities
- Mortgage insurance
- College funds
- Self-employed pension plans
- Pension maximization
- Alternatives to certificates of deposit
- Health insurance
- Long-term care insurance

Early Indians of Michigan, a popular Farm Bureau Insurance publication used each year by teachers, students, libraries and civic groups all across the state.

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II. Finding out more

Please let us know if you'd like an agent to contact you about:
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- Annuities
- Auto Insurance
- Other:

III. Free

Check the free material you would like mailed to you:
- Early Indians of Michigan booklet
- Homeowners Inventory brochure

IV. Your name and address

Name__________________________
Address________________________
City___________________________
State______ Zip_______
County_________________________
Phone__________________________

V. Mail to...

INSIGHTS
Communications Department
Farm Bureau Insurance
P.O. Box 30400
Lansing, MI 48909-7900
Fax: (517) 323-6615

FARM BUREAU INSURANCE

14 • RURAL LIVING • FALL 1998
Steve McElroy (pictured with his daughter Megan) has implemented several buffer strips on his farm in Hillsdale County. He says the strips help the farmer and the environment.

by Jennifer Vincent

Eight years ago, massive rainfall caused a great deal of erosion on the hilly landscape of the McElroy farm. Steve McElroy, a Hillsdale County corn and soybean grower, watched as topsoil washed into the Beebe Creek abutting his crops. The Soil Conservation District, now the Natural Resources Conservation Service (NRCS), provided some answers on how to cut his losses and be more environmentally conscious with the introduction of control basins on his property. The mid-field berms (dikes) have surface risers designed to drain runoff through underground tile, eliminating the devastating effects of gullies.

Today, the conservation effort has taken another step forward in protecting water and the loss of soil by offering farmers conservation buffers with 10- to 15-year contracts under the Conservation Reserve Program’s (CRP) continuous sign-up.

Best described as strips or small areas of land in permanent vegetation, conservation buffers slow water runoff, trap sediment and enhance water infiltration. They can trap fertilizers, pesticides, bacteria, pathogens and heavy metals, minimizing the chances of these potential pollutants reaching surface water and groundwater sources. Buffers also trap snow and reduce blowing soil in areas with strong winds. Whether it is along field edges or within fields, “we’re hoping farmers will take advantage of this program,” said Dennis Haskins, resource conservationist for Hillsdale County NRCS. “We have about 100 farmers enrolled in it now, but more and more are catching on. It’s the right thing to do.”

Participants receive annual rental payments, as well as technical and cost-share assistance to start the practices.

Haskins sees it as a way for farmers to be out in front by implementing conservation measures voluntarily. “Those who believe that chemicals won’t be more regulated in the future aren’t carrying a full load of bricks,” he said. “More than 70 percent of the farmers who come in to check out the program end up enrolling in it.”

According to Christine White, Farm Service Agency state executive director, Michigan has more than 2,700 acres already dedicated to buffer practices. The sign-up is a key component of the U.S. Department of Agriculture’s Conservation Buffer Initiative, which promotes the voluntary enrollment of 2 million miles of buffers along the nation’s streams, rivers and tributaries. Currently, about 619,000 acres have been dedicated nationwide.

“I wanted to do the right thing and keep the government out of my operation,” McElroy said. “The buffers force myself and custom applicators to stay away from the creek. This program is good for me and good for the next generation.”

McElroy signed up last year in the program and is considering one more project on his 720-acre farm, which would add to the 15 acres he has already set aside. “The conservation office has been very good to work with, and they’ve allowed me to straighten my lines using the buffer and thus making my property more farmable,” he said.

Mark Barber, who farms near the Ohio border in Hillsdale County, was able to use the buffer program to straighten out his field, as Laird Creek runs through his farm on an angle. “It floods on occasion every year,” he said. “I was worried about the chemicals. This program is a good thing for the environment.”

Calling buffer strips a win-win situation for everyone, Steve Law, a resource conservationist for Clinton County, said, “the drain commissioner wins, wildlife advocates win, the farmer wins and the environment wins. There is no down side to this, and rental payments are 20 percent more than the regular CRP program because we’re targeting the most environmentally sensitive land.”

So why would farmers hold out? Law says some fear they will have to let people hunt on their land or somehow they will lose ownership. “That’s not true at all - it’s still their property.”

The CRP program covers half the cost of seeding the buffer, Law said, as long as a farmer doesn’t plant hay or graze it. “But they can mow it to keep the weeds down if they want.”

To find out more information about buffer strips and enrollment, contact your local USDA Service Center. RL.
An open letter to all Farm Bureau members

Dear Farm Bureau member:

New federal medicaid rules, and changes in state laws, are putting Michigan Farm Bureau members at increased risk of depleting their life savings to pay the high costs of long-term care. In 1996, the state of Michigan capped the number of Medicaid (Welfare) beds available in nursing homes and is using the savings to get younger generations off Welfare and into the workforce.

Twenty-eight states now have “Family Responsibility” laws requiring adult children to pay a portion of their parents long-term expenses, and new federal laws provide tax deductions for farm families and other businesses, as well as individuals, who purchase private long-term care insurance.

The Michigan Farm Bureau, out of concern for their 161,000 Michigan members, is pleased to make available the CNA long-term care plans to all members. CNA has been writing long-term care plans for more than 32 years, longer than any other company. The CNA plans provide world wide protection, and will do more than any other company to keep one in their own home and out of a nursing home. This would include basic home care (including homemaker services), adult day care, assisted living facilities and adult foster care. Of course, nursing home coverage is also covered, and all Farm Bureau members receive a special 10% discount not available to the general public.

Sincerely,
Your Farm Bureau member services

P.S. Can you and your family afford to go it alone? If the answer is no, as it is for most Michigan Farm Bureau families, contact your local Farm Bureau Insurance agent for more information and a free personal analysis. If you do not have a Farm Bureau Insurance agent, call 800-292-2680, ext. 3240 or 3239 for a referral.
Survey shows, for the second consecutive time, consumers paid more at the grocery store.

by Dennis Rudat

Consumers paid slightly more at the grocery store checkout line during the third quarter of 1998, according to the American Farm Bureau Federation's Marketbasket Survey. The average price of selected grocery items increased 22 cents from the year's second quarter.

The 16 selected items on the survey cost $32.40, up from the second quarter's $32.18 average. It marks the second consecutive increase in the average price. It also reflects a third-quarter trend. Since AFBF began the Marketbasket Survey in 1989, increases have been the norm during the third quarter in all but two surveys. The last third-quarter decrease came in 1993, when the average dropped 30 cents from that year's second quarter.

"The overall price increase is pretty much in line with the rate of inflation, which is around 2.5 to 3 percent," said Terry Francl, a senior economist with the American Farm Bureau Federation. "And the rate remains very low."

A one-pound package of bacon increased 17 cents to $2.30, representing the largest increase on the survey. Francl says the retail bacon figures certainly don't reflect the price hog producers are receiving for their product. He said, however, that the increase in price could reflect a seasonal demand for bacon, which tends to increase during the summer months. Americans enjoy bacon on such items as hamburgers and bacon-lettuce-and-tomato sandwiches.

Of the 16 items on the survey, eight increased in price. In addition to the bacon prices, a 32-ounce jar of mayonnaise increased 15 cents to $2.64. Other increases included corn oil, $2.60 per 32-ounce jar, up 8 cents; sirloin tip, $2.69 per pound, up 5 cents; eggs, 96 cents per dozen, up 4 cents; potatoes, $1.58 per five-pound bag, up 3 cents, whole fryers, 98 cents per pound, up 2 cents; and ground chuck, $1.66 per pound, up 1 cent.

While half of the items on the survey increased in price, Francl wonders why the retail numbers aren't consistent with prices farmers and ranchers are receiving for their products. "The real question is whether the processors and retailers are simply going to extract a higher margin," said Francl.

Six items on the survey decreased in price, with a five-pound bag of flour and a pound of pork chops representing the largest decrease. The price of flour dropped 9 cents to $1.38 while pork chops fell 9 cents to $2.94. Other decreases included white bread, $1.17 per 20-ounce loaf, down 4 cents; whole milk, $2.52 per gallon, down 3 cents; cheddar cheese, $3.06 per pound, down 3 cents; and apples, 94 cents per pound, down 2 cents.

A 32-ounce jar of vegetable oil ($2.25) and a 20-ounce box of cereal ($2.74) remained unchanged.

AFBF, the nation's largest general farm organization with more than 4.78 million members, conducts its informal quarterly Marketbasket Survey to help track retail food prices to ensure they are in line with prices received by the nation's farmers and ranchers. While many grocery prices have increased during the past year, the farmers' share remains fairly steady. The farm value of each food dollar spent in the United States is approximately 23 cents. Labor, at 37 cents, is the largest component of the consumers' food dollar.

Volunteer shoppers from 35 states participated in this latest survey in early September. The average total price of this quarter is only $3.90 higher than the $28.50 average price of the inaugural survey conducted during the first quarter of 1989. That averages into just a 40-cent increase in prices per year over a nine-year span. RL

<table>
<thead>
<tr>
<th>Item</th>
<th>Nationwide price</th>
<th>Michigan price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ground chuck, lb.</td>
<td>$1.66</td>
<td>$1.79</td>
</tr>
<tr>
<td>Sirloin tip roast, lb.</td>
<td>2.69</td>
<td>2.79</td>
</tr>
<tr>
<td>Center cut pork chops, lb.</td>
<td>2.94</td>
<td>2.69</td>
</tr>
<tr>
<td>Bacon, lb.</td>
<td>2.30</td>
<td>2.69</td>
</tr>
<tr>
<td>Whole fryers, lb.</td>
<td>.98</td>
<td>.99</td>
</tr>
<tr>
<td>Grade A large eggs, doz.</td>
<td>.96</td>
<td>.79</td>
</tr>
<tr>
<td>Whole milk, gal.</td>
<td>2.52</td>
<td>2.49</td>
</tr>
<tr>
<td>Mild cheddar cheese, lb.</td>
<td>3.06</td>
<td>3.09</td>
</tr>
<tr>
<td>Red Delicious apples, lb.</td>
<td>.94</td>
<td>.89</td>
</tr>
<tr>
<td>Russet potatoes, 5 lb.</td>
<td>1.58</td>
<td>1.69</td>
</tr>
<tr>
<td>Cheerios, 10 oz. box</td>
<td>2.74</td>
<td>2.99</td>
</tr>
<tr>
<td>All purpose flour, 5 lb.</td>
<td>1.38</td>
<td>1.39</td>
</tr>
<tr>
<td>White bread, 20 oz. loaf</td>
<td>1.17</td>
<td>1.39</td>
</tr>
<tr>
<td>Mazola corn oil, 32 oz.</td>
<td>2.25</td>
<td>2.49</td>
</tr>
<tr>
<td>Crisco vegetable oil, 32 oz.</td>
<td>2.60</td>
<td>2.39</td>
</tr>
<tr>
<td>Kraft mayonnaise, 32 oz. jar</td>
<td>2.64</td>
<td>3.09</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$32.40</strong></td>
<td><strong>$33.64</strong></td>
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Muskegon County officials consider cranberry farming

by Sue Stuever Bartel

and that's no longer needed for spreading county wastewater could be turned into a cranberry farm if agriculture industry representatives have their way.

About 11,000 acres of land surround Muskegon County's wastewater treatment facility—some with soil that's too heavy for land-application of wastewater. Of that land, 1,890 acres that now grow corn and soybeans are looking for a new use.

"We had recently done some work on the wastewater treatment plant to look at long-term capacity and the long-term needs of the community that is served," said Tim Westman, the facility's manager. "We looked at how we were going to deal with that amount of water and looked at the alternatives we had. We determined we could actually do everything we had to do north of M-46 with some improvements to that portion of the site, at a rate such that it was actually cheaper than trying to fix this other area up."

According to Frank Bednarek, Muskegon County administrator, interest in using the land for something that would stimulate the county's economy stemmed from efforts made in the past.

"Several years ago, Muskegon County embarked on a project to develop some land and attract industry to Muskegon," he explained.

A successful airport business park led the way. Commercial businesses helped create the park, according to Bednarek, so he decided to approach other businesses for ideas about what to do with the wastewater facility land.

Bednarek first met with representatives of Consumers Energy. One of them was Dave Guikema, also chair of the Department of Agriculture's Rural Development Council of Michigan. Guikema encouraged Bednarek to seek the input of the Michigan Department of Agriculture (MDA).

Bednarek did just that, and MDA latched on to what could be an opportunity to promote an industry they had long been wanting to foster—cranberry production. MDA studied whether cranberries could be grown on the Muskegon County site.

"Eleven months ago, we brought the results of that study to the county board of commissioners," said David Skjærland, executive director of the Rural Development Council. The results were positive.

MDA found that the 1,890 contiguous acres of land could hold 1,000 acres of cranberry vines. It had two important ingredients for growing the tart, red berries: low soil pH and a high water table.

"That's why we got all excited—because the soil conditions are ideal for growing cranberries at this site," Skjærland said.

Dr. Ron Gold, of Michigan State University's horticulture department, agreed. He said cranberries also require a consistent source of water—water that could be taken from holding ponds or existing ditches nearby.

Wastewater from the treatment facility could not be used on the cranberries, mainly because it would raise the pH.

After Skjærland presented the results of the initial study a year ago, the county board of commissioners approved further investigation. Michigan State University Extension was to fund a market feasibility study, while the county would cover an engineering study of the site. While the county has not yet started its part (bids have been let, but no contract awarded), the market study showed a profit potential.

MSU Extension Director Arlen Leholm said money from PROJECT GREEN—plant industry funding from the state Legislature—footed the $70,000 bill for the market feasibility study.

"Cranberries can provide a higher rate of return than almost any other agricultural crop," Leholm said. "As the land-grant university involved in this, we want to create jobs and income in the state of Michigan."

Senechal, Jorgenson, Hale & Company, Inc., completed the market study. Bill Jorgenson, a partner in the market research firm, concluded that the Muskegon County site could create a profitable cranberry concentrate supplier if the berries are grown at low cost and if an existing fruit processor makes the concentrate.

"If you are a low-cost producer, whether the market goes up or down, there will always be a market for your crop," he said.

Jorgenson said building a cranberry processing plant in the county would be a money loser, but said several fruit processors within a 100-mile radius have indicated a willingness to process the berries.

Because most Michigan fruit must be processed immediately after harvest, plants sit idle part of the year. Cranberries can be frozen until processing time is available.

Jorgenson said besides getting money from sale or lease of the land, Muskegon County would create jobs and spur the economy by $60 million over three to four years.

Tourism could also get a $10 million boost, Jorgenson said. "Most of your tourism occurs in the summertime," he told a group gathered in Muskegon to hear the study results. "This would bring it into fall."

Cranberries are harvested September and October. RL.

Salads tempting America's taste buds

The National Restaurant Association (NRA) says salads are becoming the meal of choice when Americans sit down for meals out. Salads made with chicken, beef, seafood, fruit and vegetables and topped with exotic dressings have become a popular way for Americans to add more fruits and vegetables to their diets.

"More and more Americans are ordering salads as a main course, and the restaurant industry is meeting that growing demand," said Joseph Fassler, NRA chainman. NRA-sponsored research shows women are more likely than men to order main-dish salads, and more than half of the salads included beef, lamb, pork, chicken, finfish and shellfish. Chicken and shellfish were the most popular additives to salads.

According to the Agriculture Department, Americans consume 40 percent more grain products and 20 percent more fruits and vegetables than they did in 1970.

Turf researchers prove valuable in United States, other countries

by Darron Birchmeier

The next time you step inside a domed stadium to watch your favorite sporting event, you may notice something a little different on the field — real grass! The new turf, as a result of extensive research done by the Department of Crop and Soil Sciences at Michigan State University (MSU) would reduce athletic injury caused by artificial turf, and allow for a healthier look to fields.

Dr. John Rogers, associate professor of turfgrass science, worked extensively on the turf project that was used for two weeks in the Pontiac Silverdome for the World Cup Soccer Championships in 1994. He also worked on the turf that was used for the U.S. Soccer Cup Championships in 1993.

"It became my life for a couple years," Rogers said. "We keep trying to find the best turf that has the minimum amount of inputs to keep it alive."

Rogers explained the biggest challenge in keeping turf alive indoors is the amount of light needed. For turf, 15 to 30 percent light is needed to keep the turf alive, and places like the Silverdome allow about 6 percent.

"Real turf inside the Silverdome is not an option," Rogers noted. "With most domes, real turf isn't an option unless a new roof is designed and installed so more light gets on the turf."

Research is not focused strictly on uses in the United States, however. Rogers and graduate assistant John Sorochan have done thorough research on finding the right turf to be used in a domed stadium in Argentina.

Seed and sod studies were conducted, and Rogers and Sorochan served as consultants for the ground crew in Argentina.

"All the research is for soccer stadiums," Rogers said. "Teams will not play soccer on artificial turf — it's too harsh on the players."

Currently, the MSU researchers are completing their data collection and evaluation, and will soon be sending it on to the ground crews in Argentina for them to begin planting the best turf to be used in the stadiums.

The turf is grown in hexagon modules that weigh nearly 3,000 pounds. One of the biggest challenges with the turf is moving it, Rogers explained. Research is currently being done to make bigger plots, which would mean more weight, but fewer plots to move.

Sorochan, a 1991 graduate of the two-year turf program at MSU, explained that more research is being done to increase the quality and quantity of turf grown each day.

"Recycled car tires are being used as a base to start new plots and new wetting agents are being researched," Sorochan said. "Net lawns, where a net is used to keep the soil together better, is also being researched."

Students conduct research in a domed stadium located on the corner of Mount Hope and Farm Lane on the campus of MSU. The 70-foot by 50-foot dome holds approximately 100, 4-foot by 4-foot boxes, each conducting a different experiment on turfgrass. Turf students are responsible for mowing and data collection and serve as research aides to professors.

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The Miracle of Life exhibit, sponsored by Michigan Farm Bureau, Blue Cross Blue Shield of Michigan and MSU's College of Veterinary Medicine, taught and entertained many visitors during the Michigan State Fair, Aug. 25-Sept. 7. More than 448 births of piglets, calves, lambs and chicks were witnessed by people of all ages and backgrounds.

Farm Bureau members assisted with the two-week exhibit, marking the fifth year the booth has been set up at the state fair. RL

Be careful with space heaters

When the winter turns nasty and cold, human beings seek warmth. For many, that warmth may be provided by a space heater. Hobbyists and car buffs use space heaters so they can work in the garage in the winter. Some families use space heaters to warm a room addition, a cabin or a mobile home. Some people burn kerosene heaters to keep the gas bill down; others, because the gas has been cut off. Unfortunately, these may be the people least likely to be able to afford the newer, safer heaters according to Cheryl Krysta of the Michigan State University Extension service.

Three types of dangers need to be considered when you are using space heaters:

- The heater may start a fire.
- The heater may spark an explosion.
- The heater may make the indoor air unsafe, either by using up the oxygen in the room or by giving off a toxic gas.

What should you do? The best thing you can do is NOT use space heaters. The next best thing is to buy a new space heater, preferably an electric one, that carries the UL symbol, showing it is approved by Underwriter Laboratories. Then take every precaution.

Avoid fire

Any space heater, gas or electric, can set furniture, blankets or curtains on fire if it is close enough to raise the temperature of the item to its ignition point. Because heaters usually run for many hours, the heat has a long time to build up. Also, children or careless adults may throw off blankets or drop clothing near or touching the space heater.

Recommendations: Keep any space heater at least three feet from any combustible material. Keep a close eye on it. Do not use one in a room with young, mobile children. RL
Abandoned wells cause problems for farmers and homeowners

by Carrie Merchant

A boy is playing with his dog on a sunny afternoon when suddenly the dog lets out a frightened yelp and disappears. The dog has fallen into an abandoned well only 8 inches wide and is trapped there. The number of abandoned wells is increasing, creating problems for homeowners and farmers nationwide.

The exact number of abandoned wells in the United States is not known; however, it is approximately 2 million, maybe more. While no studies have been done to find the exact number of wells, Michigan has more private wells in use than any other state — 1.3 million, according to the Department of Environmental Quality. The highest concentration of these old wells is in urban and suburban areas and it is likely that Michigan has the most abandoned wells.

Ingham County, Meridian Township has been the first to complete a well survey. Customer records dated back to 1959 were used to find the number of wells in the township. While the numbers did not include abandoned farms, 2,836 home sites were found to have abandoned wells. If more communities would complete surveys such as this, the old wells could be found and taken care of.

Abandoned wells are extremely dangerous for several reasons. Children and pets can fall into them. In the 1980s, "Baby Jessica" was trapped in a backyard Texas well for days; the well was only 8 inches wide. Old wells are sometimes used for illegal dumping of waste. Chemicals and other contaminants sink deep into drinking water aquifers.

Farmers have found many abandoned wells on their land. They can prove to be dangerous to those working on the fields. Farmers also have to be extra careful when using pesticides or other chemicals on their fields.

So what is to be done to help the problem? Homeowners can help by finding the location and number of abandoned wells on their property. The abandoned wells must be filled their entire length with concrete or clay to be properly sealed. The state suggests hiring a well driller to do the job. If the location of old wells is not known, check with the local health department, the Department of Environmental Quality's Geological Survey Division and real estate records such as land surveys or title searches. For more information on abandoned wells and how to seal them, contact your local health department or call the Abandoned Well Management Program, Michigan Department of Environmental Quality at (517) 335-9322.

Who can I contact for information and assistance?

- Your local health department
- Licensed well-drilling contractors (in the Yellow Pages under Water Well Drilling and Service)
- The Michigan Well Drillers Association at (513) 428-0020
- Your local Soil Conservation District office
- The Michigan Department of Public Health Well Construction Unit at (517) 335-9183

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M I C H I G A N  F A R M  B U R E A U  • 21
Producers finding new uses for soybeans

by Darron Birchmeier

ick up a newspaper today and you'll likely notice a little box saying, "printed with soy ink." What many people don't realize, however, is that printing newspapers with the ink is the tip of the iceberg and, unlike the Titanic, many new soy uses and ideas will never sink.

A very small portion of the soybean harvest is being used for new and innovative uses, according to Keith Reinhold, of the Michigan Soybean Promotion Committee. He said animals consume 95 percent of the soybean meal, and 85 percent of the oil is used for food, leaving little to other uses.

The Thumb Oilseed Producers' Cooperative, a new, farmer-owned venture to be based in Ubly, has been working on new uses for the oil they plan to produce as a by-product to soybean meal.

"Products with the most potential include solvents, plywood adhesive and soy ink," noted Reinhold. "But many people don't realize that there are many more uses."

Train tracks are constantly oiled for railroad cars to roll on. A petroleum-based oil has been used for many years, but now soy oil is being looked into — a product that would be cleaner to use and better for the environment. Lubricants for irrigation systems and crankcase oil for cars have also been studied and used on a trial basis.

Hand and sun-block lotions are starting to use soy oil in their products. Hand cleaners and parts degreasers contain soy oil, as well.

John Deere has also found a use for soy oil.

"Approximately 25 round balers are currently using a prototype plastic door made with soy oil," Reinhold said. "The door replaced the fiberglass door, made with petroleum products, and is used to protect the user from moving parts." Soy proteins have been used in adhesives for holding plywood and particle board together. An advantage of using soy proteins is that wood can be glued together while still green, thus avoiding the need to dry it first.

"New uses in the food industry is very positive because people want to eat healthy, and are willing to pay for it," Reinhold noted.
Marilyn and Tom Irer, of St. Johns, are the largest mint farmers in Michigan. They are expecting a good harvest this year.

by Jennifer Vincent

Travelers passing through St. Johns and other portions of Clinton County will smell something a little different in the air. It's light, fresh and pleasant – it's mint.

Although small when compared with other agricultural commodities in terms of acreage and number of farmers, consumers would certainly take notice if just a handful of these mint oil producers opted out of the business.

Michigan is one of only eight states in the country producing spearmint and peppermint. Tom Irer has the claim as Michigan's largest mint farmer with 450 acres of spearmint and 150 acres of peppermint surrounding his Bengal Township home in Clinton County.

Specialty crops are always a gamble, but this year's wager looks to be paying off for Irer and other mint producers. The warming rays of early spring and the heat of this year's summer have been ideal for the mint plant.

It hasn't always been this good, Irer pointed out. Verticillium wilt, mint rust, powdery mildew and the mint beetle pose constant threats. Severe winter weather can also wipe out a crop. "In the spring of 1996, we had a record die-off from the cold and bare winter," Irer said. "More than half our spearmint was dead and the rest was beat up pretty bad."

Because mint is a perennial crop, it wasn't just a one-year loss for those farmers. Farmers dig and plant stolons from existing plants. "We plant our own root stock on the farm," Irer said. "We use about five tons per acre, so it's quite prohibitive to have it hauled in. What it requires is good planning. Severe weather and a loss of more than half your crop is something you really can't plan for."

Developing new commercial varieties more resistant to disease, more tolerant to climate variations and with better resistance to certain pests, is a major goal of the Mint Industry Research Council (MIRC). Irer, a Farm Bureau member and past Clinton County Farm Bureau president, is Michigan's representative for MIRC, which devotes more than half of its annual research budget to varietal improvement projects.

In total, Irer and his wife, Marilyn, farm about 1,000 acres, of which about half is rented. He includes corn and soybeans as rotational crops. Irer bought out his father several years ago. "When the sugar beet industry left mid-Michigan, we (Irer family) experimented with mint," he said. "We got our first still around 1953. Before that, we used the neighbor's still for a number of years."

Not unlike any other specialty crop, mint's market value has had its ups and downs. The mint industry has moved to a greater level of contract production. The problems in Asia have stopped the 7 percent yearly climb. "Mint has cycles like all crops, but I think I've done better raising a specialty crop than general crops."

Mint oil is stored in glands on the underside of the mint leaves and is harvested in mid-June to late September, depending on the crop and the growing region.

Irer started doing a second cutting of spearmint in 1991. It has proven to be an effective method for gaining more during the short, three-month season. This year, the first cutting was the second week of July. The second crop will be harvested around Aug. 20. Peppermint harvest started the first of August.

Cut mint is left to dry in the field for at least a day and then chopped and blown into a mint tub. The tubs are then brought into the distillery, where steam pressurizes and then vaporizes the mint oil. Once extracted, condensers return it to a liquid state and the oil is separated from the water and filled in 55-gallon drums. Mint drums are currently selling for about $5,000 each.

Irer says a few years back he took a look around Michigan and realized he was the largest mint farmer. "At that point I thought, I'd better be doing a good job of it," he said. RL

**Mint facts**

- Ninety percent of mint oil produced in the United States is used in just two categories of consumer products – toothpaste and chewing gum.
- Mint oil is one of the last all-natural flavorings yet to be synthetically duplicated. Because of its extreme complexity, an artificial mint flavor for commercial use has never been successfully produced.
- A little does go a long way when you're talking mint. One drum of mint oil, weighing about 400 pounds, can flavor more than 5 million sticks of chewing gum or 400,000 tubes of toothpaste.
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