



Newsletter Extension

Fruit ICM News

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Calendar

January 21-23, 2004: Ohio Fruit & Vegetable Growers Congress, Ohio Roadside Marketing Conference, & Ohio Christmas Tree Association Winter Meeting, SeaGate Convention Centre and Radisson Hotel, 410 Jefferson Avenue, Toledo. For more information contact Tom Sachs at Ohio Fruit Growers, 614-246-8292, e-mail growohio@ofbf.org. Check out the web site at <http://www.ohiofruit.org>.

The Ohio Fruit Growers Society (OFGS), the Ohio Vegetable and Potato Growers Association (OVPGA), Direct Agricultural Marketing Association (DAMA), Ohio Christmas Tree Association (OCTA) and The Ohio State University (OSU) are once again sponsoring the combined conference in 2004. The conference provides a forum for allied industry representatives and university researchers to interact with growers and marketers in over 125 education sessions and an outstanding trade show.

Jane Eckert, Eckert AgriMarketing, kicks off the conference with a one-day "Developing a Farm Market Plan Workshop" on Wednesday. This workshop is designed to develop a marketing plan, strategies, and budgets and discuss customer service and research. Also on Wednesday are many excellent general sessions. These presentations begin with their customary safety session that qualifies for the Ohio Farm Bureau Workers' Compensation Program required safety training.

Sarah L. Fogleman of Kansas State University will conduct several presentations about workplace communications and creative employee compensation. An applied value-added session has Don Nugent of Graceland Fruit Farm, Frankfort, Michigan discussing how he grew his fruit production into an international business that is now the largest processor of infused fruit in the world. Wednesday's final session presents Christa Quinn, a weather caster for WTVG-ABC 13, who will describe weather forecasting technologies and how forecasts are developed.

The trade show will open Wednesday at 1:00 p.m. with a reception, and prize drawings begin at 4:00 p.m. On Thursday the trade show will be open from 8:00 a.m. to 5:30 p.m., with free morning coffee and pastry. An ice cream social is planned for 4:00 p.m. Friday's trade show hours will be 8:30 a.m. to 1:30 p.m., with free morning coffee and pastry once again. There will be educational sessions presented

at the trade show throughout the conference, with topics covering food safety, retail market sales, production practices, environmental self-assessment, research needs, and more. An Exhibitors' Breakfast will be served Thursday at 7:00 a.m. in the trade show.

Ohio State University education advisors have once again assembled a superb educational program for growers of tree fruit (apples, cider, and stone fruit), processing vegetables, Christmas trees, small fruit, potatoes, greenhouse vegetables and hydroponics, truck crops, and direct marketing.

Thursday evening's special events begin with a Dave Ferree Recognition Dinner at the Radisson. Following the dinner, the associations are introducing a Presidents' Networking Reception for growers, marketers, speakers, educators, and trade show representatives. Concurrent with the reception will be a card party for informal socializing. Other special events for the conference include the Friday Awards Breakfast, where the associations will present their Distinguished Service Awards. In addition, Cider Contest Blue Ribbon Awards will be announced and OVPGA and OFGS scholarship recipients will be recognized. Association annual meetings will follow the breakfast.

The 2004 conference will be another outstanding opportunity for industry interaction. Growers and marketers should check out the pre-registration savings and register today. Exhibit space, sponsorships, and show special opportunities are still available for companies wishing quality access to growers and marketers. Contact Rachel Rittinger at 614-246-8292 or growohio@ofbf.org or access our web site listed above for information on exhibiting or becoming a sponsor.

For more information, contact Tom Sachs at 614-246-8290, email: tsachs@ofbf.org or Rachel Rittinger at 614-246-8292, email: rittinger@ofbf.org, or Two Nationwide Plaza, P.O. Box 182383, Columbus, Ohio 43218-2383. Session topics and schedules are found on the association web sites at <http://www.ohiovegetables.org> or <http://www.ohiofruit.org>.

Correction to Ohio Fruit ICM Issue #47 EIQ Article

Source: Dr. Anton Baudoin, Associate Professor of Physiology and Weed Science in the Department of Plant Pathology at Virginia Tech

The EIQ article in Issue 47 listed ziram and Polyram (metiram) "as members of the EBDCs (ethylene bisdithiocarbamates) class." Thanks to Dr. Baudoin for pointing out that "whereas metiram is indeed an ethylene bisdithiocarbamate, ziram is not; it is a dithiocarbamate, I doubt that they produce ethylene thiourea."

A Scientist Finds Benefit In Small Doses of Toxins

Source: Gareth Cook, Boston Globe Staff, via Joe Kovach, Ohio State University Extension IPM Coordinator

Edward J. Calabrese, a gray-haired man who works in a rundown office surrounded by documents on highly toxic chemicals, has an explosive idea. For more than a decade, Calabrese, a respected professor of toxicology at the University of Massachusetts, endured ridicule as he gathered evidence showing that small amounts of poisons, even cancer-causing chemicals like dioxin, can be good for you. His research threatens to overturn a key principle of environmental regulation, which assumes that if a large quantity of a chemical causes cancer, then a small quantity is still dangerous, and that the ideal amount is zero. Calabrese's work suggests that for many chemicals, exposure to a low level may be healthier than no

exposure at all.

Though long relegated to the scientific fringe, Calabrese's idea is suddenly being taken seriously. He has landed several papers in prestigious research journals. Other scientists are citing his work, the invitations to speak at universities and scientific meetings are flooding in, and the concept has been added to two leading toxicology textbooks.

All of this has put Calabrese at the center of a politically charged debate with broad implications for health. If the regulations that protect the nation's air, water, and soil are not stringent enough to keep toxins below hazardous levels, Americans will die. Yet if Calabrese is correct, and small quantities of many toxins can actually be beneficial, then it could bring innovative drug therapies, save billions by relaxing overly strict environmental standards, and fundamentally change the way scientists and the public think about poisons.

"I think he is shaking us all up in a way that is really useful," said George Gray, a toxicologist who is executive director of the Harvard Center for Risk Analysis.

The concept underlying Calabrese's work is called "hormesis." In the broad sense it is hardly controversial. Vitamins are healthy in the right dose; toxic in larger ones. A glass of red wine a day can be good for you; a gallon is not.

But this is not how scientists have traditionally thought about the risks posed by environmental chemicals. One of toxicology's most important tools is to observe the effects of large doses of a chemical on laboratory animals, and then use that data to estimate the effects of much lower doses on humans over longer periods.

In the case of cancer-causing agents, toxicologists assume that the harmful effects decrease as the dosage goes down, but that they do not hit zero until the exposure is zero. For threats not involving cancer, the model is only slightly different; scientists also assume that smaller doses cause less harm, and the harmful effects hit zero as soon as the dose hits a certain low threshold.

These two ideas form the bedrock of modern toxicology, but Calabrese began to suspect that they were wrong when he discovered, as a college student, that spraying peppermint plants with very low doses of a growth retardant made the plants grow larger. So at low doses, the growth inhibitor didn't just stop working -- it had the opposite of its intended effect.

Other scientists have noticed unexpected effects like this, Calabrese said. At low doses, both dioxin and DDT have been shown to reduce some cancers in lab animals. Low doses of cadmium, which can be highly toxic, reduces liver cancer in rats.

In his research, Calabrese, 57, has shown that these effects may be very common. Calabrese and a colleague searched through the toxicology literature, looking for all examples where scientists had measured the response to doses below the threshold at which the chemical is thought to have no effect. Their statistical analysis, published this year in the journal *Toxicological Sciences*, showed that, on average, these low doses had a measurable effect -- itself a surprise -- and that the effect was the opposite of the large-dose effect. Chemicals that had a bad effect at high doses tended to have a beneficial one at small doses.

Their analysis included a wide variety of life forms -- including plants, animals, and microbes -- and

of effects -- such as growth, reproduction, and behavior.

"What I think is going on here is a revolution in thought to a bunch of people who are not used to a revolution," Calabrese said.

Before hormesis could be used to justify changes in regulations, scientists would need a better understanding of exactly how it works, said William H. Farland, acting deputy assistant administrator for science in the Office of Research and Development at the Environmental Protection Agency. A chemical that is beneficial in one way may cause problems in other areas, he said. Or levels of a chemical that may be healthy for some people, or even positive, may be harmful for children, pregnant women, or others.

And even when unexpected things happen at small doses, they are not always positive. Several researchers have found that certain chemicals that act like hormones can cause damage at much lower levels than anyone had expected.

As the science improves, Farland said, researchers are seeing more and more surprises at low levels of exposure. This "most likely represents very complex biology," Farland said, "and what we have to do now is understand that biology."

One mechanism behind hormesis is that small amounts of chemicals can evoke a stress response from cells, causing them to devote resources to defending themselves. For example, laboratory animals forced to fast periodically, and thereby put stress on their entire system, develop neurons that are more resistant to diseases like Parkinson's, according to research done by Mark P. Mattson, chief of the Laboratory of Neuroscience at the National Institute on Aging. Other experiments have shown that chemicals can evoke the same stress responses.

Mattson recently invited Calabrese to visit his lab to discuss the possibility of experiments that would test whether low doses of otherwise toxic chemicals strengthen the brain's defenses against diseases like Alzheimer's, Parkinson's, or Huntington's. "The idea would be to identify a treatment that could be given long term and delay the onset of disease," Mattson said. "This is a long way from something that could be applied in humans, but it is worth pursuing."

Calabrese's work, said Farland and other scientists, is part of a dramatic rethinking of the biological effects of low-level exposures. New scientific tools and the explosion of detailed genetic information is allowing scientists to move from the standard animal toxicity tests, which use massive doses, to more detailed looks at how individual molecules interact with living cells. This has led to a growing recognition that effects can differ in kind, not just degree, as the concentration changes.

Indeed, the National Toxicology Program, the government's clearinghouse for toxicology research, just began an expansive, year-long review to change its approach, given the developing scientific approaches. "The idea is, what are we going to do to change this discipline," said Christopher J. Portier, the program's associate director. "I am sure that hormesis will be a part of the discussion as we move through this."

Gareth Cook can be reached at cook@globe.com.

Tax Planning and Management Considerations for Farmers in 2003

Source: George F. Patrick, Department of Agricultural Economics, Purdue University via Dave Miller, OSU Extension Farm Management Specialist

Note: Tax tips are available at: <http://www.agecon.purdue.edu/extension/pubs/taxplanning.asp>.

The following considerations need the help of a tax advisor to make them work for you.

Farm Income Averaging Regulations

Farm income averaging regulations were released in January 2002. The regulations clarify that landowners whose income is based on a share of production can treat that income as electible farm income for income averaging. For 2003 and later years, the landowner must have a written lease agreement with the operator before significant activities begin in order to treat that income as farm income for income averaging.

A farm income is based on taxable farm income. It includes all income, gains, losses, and deductions attributable to any farming business. Gain from the sale or other disposition of land is not included, nor is the sale of timber. The instructions for Schedule J indicate that farm-related items are generally reported on Schedule D, Schedule F, Form 4797, Part II of Schedule E (Income or Loss from Partnerships and S Corporations), and Form 4835. Thus, farm income from flow-through entities such as S corporations and partnerships does qualify. Wages and other compensation received as a shareholder in an S corporation engaged in farming is also farm income. Farm income averaging is not available to regular corporations, trusts, or estates. Cash rent landowners are also excluded.

The basic concept of farm income averaging is simple and uses Schedule J. A farmer may elect to average part or all of the farm income in the election year, e.g., 2003, and have that elected farm income treated as if it had been earned equally over the preceding three base years, 2000 to 2002, and taxed at the rates for those years. Income is not carried back to prior years with income averaging. There is no change in the income reported for the base years. Rather, the unused tax brackets of the base years are used. Note that the elected income is allocated equally over the three prior or base years. If one of the three preceding years has a very low income or loss, there is no possibility of allocating more of the elected farm income to that year. Furthermore, for future income tax averaging, say in 2004, the portions of the base years' tax brackets used with the previous income averaging in 2003 are not available for 2004. Although income averaging may reduce the income tax liability of a producer, income averaging has no effect on self-employment tax liability.

Farmers can elect, subject to some restrictions, the amount and type of income that they wish to average. Commonly, farmers will have ordinary income from Schedule F and depreciation recapture. They may also have Section 1231 gains reported on Form 4797 that are treated as long-term capital gains. In the 2000 to 2003 period, the maximum tax rate on long-term capital gains has been 20 percent and 15 percent for dispositions after May 5, 2003. A farmer can elect to average ordinary income and allocate 2003 farm capital gain income (unless offset by non-farm capital losses) to the 2003 year. For example, assume a producer has \$50,000 of Schedule F net income, \$30,000 of farm Section 1231 gains, and no non-farm income or losses. The farmer could elect to average up to \$50,000 of farm income and allocate all of the Section 1231 gain to 2003. All of the elected income would be ordinary income and allocated equally to the three prior years.

However, if the farmer elected to average \$60,000 of farm income, at least \$10,000 would be Section 1231 gains. In this situation, one-third of the elected Section 1231 gain would be taxed according to the rules for each base year.

Farmers who are subject to the alternative minimum tax (AMT) in a year will not reduce their tax liability for that year by filing Schedule J. In some instances, use of Schedule J may make a farmer subject to AMT, and the farmer will not receive all of the potential benefit from income averaging. Furthermore, in most instances, the AMT associated with income averaging does not result from deferral items (e.g., depreciation adjustments) and does not result in an AMT credit for regular tax purposes in a future year.

Income averaging can be used even if it does not reduce tax liability for the current year. An individual might be in a situation in which taxable incomes in the three base years were very low. If 2003 farm income were averaged, this might not reduce the 2003 tax liability. However, reducing 2003 income for future income averaging might increase potential tax savings for an individual who expected a substantially higher farm income in a future year. For example, a married individual might have taxable income of \$25,000 in 2003 and very low taxable incomes in the 2000 to 2002 period. Electing to average the \$25,000 of farm income in 2003 would not reduce the tax liability because the income would be taxed at the 15-percent rate for prior years. However, the taxable income for 2003 could be reduced to \$0, which could benefit future income averaging. If taxable income had been negative in any of the base years, 2000-2002, then income averaging in 2003 might reduce taxes and reduce 2003 taxable income to \$0.

Income averaging will have the greatest attraction for farmers whose income in one year is much higher than in the preceding three years and who have made only limited capital expenditures eligible for additional first-year depreciation or Section 179 expensing. (See following article). Beginning farmers with limited income in prior years could be in this situation. Individuals do not have to have been in farming in the base years to qualify for farm income averaging. Farm families whose off-farm income has increased sharply (perhaps because of a new off-farm job) would be eligible to average their farm income and perhaps reduce their current tax liability. Note that only farm income is eligible for income averaging.

Retiring farmers and others disposing of assets may also be able to take advantage of income averaging. Depreciation recapture on machinery, equipment, buildings, and purchased breeding stock is reported as ordinary income. The disposition of these assets in one year may result in a high marginal tax rate and benefits from income averaging.

Dispositions of assets for up to a year after an individual ceases farming are presumed to be within a reasonable time and would be eligible for farm income averaging. Depending on individual circumstances, dispositions of assets over longer periods may also be acceptable for income averaging. Income averaging may also be helpful for an individual in a situation in which the usual year-end tax planning strategies do not apply. However, income averaging is not likely to substitute for regular year-end tax planning and keeping taxable income relatively stable from year-to-year.

Tax Planning with Depreciation and Section 179

Businesses making investments in qualified assets have great flexibility in handling these assets for tax purposes. For example, assume a farmer purchases \$200,000 of agricultural machinery and equipment (7-year MACRS property) in 2003 and there is no income limitation on the Section 179 expensing deduction.

The farmer has an almost infinite number of alternative ways in which these acquisitions could be handled for tax purposes. The following calculations illustrate seven allowable alternatives, ranging from the fastest (77.7 percent in year of purchase) to the slowest possible recovery (5 percent in the year

of purchase) of the capital investment of assets used in farming:

1. \$100,000 Section 179, 50-percent additional first-year depreciation, and MACRS provides an initial deduction of \$100,000 Section 179, \$50,000 additional first-year depreciation, and MACRS depreciation of \$5,355 (10.71 percent of \$50,000) for total first-year deduction of \$155,355 (77.7 percent of cost recovered in year of purchase).
2. \$100,000 Section 179, 30-percent additional first-year depreciation, and MACRS provides an initial deduction of \$100,000 Section 179, \$30,000 additional first-year depreciation, and MACRS depreciation of \$7,497 (10.71 percent of \$70,000) for total first-year deduction of \$137,497 (68.7 percent of cost recovered in year of purchase).
3. \$100,000 Section 179, no additional first-year depreciation, and MACRS provides an initial deduction of \$100,000 Section 179 and MACRS depreciation of \$10,710 (10.71 percent of \$100,000) for a total first-year deduction of \$110,710 (55.4 percent of cost recovered in the year of purchase).
4. No Section 179 expensing, 50-percent additional first-year depreciation, and MACRS provides an initial deduction of \$100,000 of additional first-year depreciation and MACRS depreciation of \$10,710 (10.71 percent of \$100,00) for a total deduction of \$110,710 (55.4 percent of cost is recovered in the year of purchase). This is the same amount as alternative 3, but the deduction would not be subject to the Section 179 income limitation.
5. No Section 179 expensing, 30-percent additional first-year depreciation, and MACRS provides an initial deduction of \$60,000 of additional first-year depreciation and MACRS depreciation of \$14,994 (10.71 percent of \$140,000) for a total deduction of \$74,994 (37.5 percent of cost is recovered in the year of purchase).
6. MACRS only provides deduction of \$21,420 (10.71 percent of \$200,000) or 10.7 percent in the year of purchase.
7. Alternative Depreciation System (straight-line over 10 years) provides an initial deduction in the year of purchase of \$10,000 (\$200,000 divided by 10 years divided by 2 for the half-year convention) or 5 percent.

If the qualifying new property was acquired through a like-kind exchange, the tax planning alternatives would be similar to those just illustrated. Only the boot portion of the new asset would be eligible for the Section 179 expensing election. However, the entire basis of the new asset (adjusted basis of the old asset plus boot) would be eligible for the additional first-year depreciation unless the trade-in was acquired and traded in within the same tax year. With a like-kind exchange, MACRS depreciation would continue to be taken on the basis of the asset that was traded in.

Which of the many possible options for Section 179 expensing and depreciation should be taken by individual producers will depend on their overall 2003 tax situation. There are trade-offs between the value of tax-savings of deductions for income and self-employment tax purposes in one year versus those deductions being spread over several years. Both time value of money considerations and expected future income are important in making these decisions. If the farmer's marginal tax rate or tax bracket is unchanged, then tax benefits from Section 179 expensing and additional first-year depreciation are higher for MACRS assets with longer class lives.

In general, the expensing election and additional first-year depreciation are applied to the qualifying property with the longest lives and those assets that are the least likely to be resold or traded. If the current marginal tax rate is low, relative to what is anticipated for future years, then slower methods of depreciation are likely to result in greater tax savings.

It would be well worth your time to find a tax advisor with software that can analyze different alternatives to find the option that would be most beneficial to your farm business.

The Ohio Fruit ICM News is edited by:

Ted W. Gastier
Extension Agent, Agriculture
Tree Fruit Team Coordinator
Ohio State University Extension Huron County
180 Milan Avenue
Norwalk, OH 44857
Phone: (419)668-8210
FAX: (419)663-4233
E-mail: gastier.1@osu.edu

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Keith L. Smith, Associate Vice President for Ag. Adm. and Director, OSU Extension.

TDD No. 800-589-8292 (Ohio only) or 614-292-1868

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