

Northern Michigan FruitNet 2013

Northwest Michigan Horticultural Research Center

Weekly Update

February 5, 2013

REGISTER NOW FOR THE 2013 INTEGRATED PEST MANAGEMENT ACADEMY

Registration for this important event closes Feb. 12., so register today for the 2013 IPM Academy.

Posted on **January 30, 2013, MSUE News**, by **Erin Lizotte**, Michigan State University Extension

[Michigan State University Extension](#) is pleased to announce the second annual Integrated Pest Management Academy (IPMA13). The [2013 Integrated Pest Management Academy](#) will take place Feb. 19-20 at the [Okemos Conference Center](#) in Okemos, Mich., and will address the weather challenges of the 2012 production season with the help of Dr. Jonathan Comstock from [Cornell University's Department of Horticulture](#).

Comstock will specifically address shifting weather patterns and the related impacts affecting agricultural producers. Comstock is a climate change expert and is co-author of both the Agriculture and Ecosystems chapters of the recent [New York ClimAID Report](#), which looks at climate change vulnerabilities and adaptation strategies. MSU experts will also be on hand to discuss irrigation, frost protection and changing weather patterns in Michigan.

On the second day of the event, participants will opt into two, half-day sessions on the topics of their choice. Morning sessions include

- "Apple and Cherry IPM" Come with us on a season-long excursion where we will show how to tailor your integrated pest management decisions to produce a marketable crop in Michigan apple and cherry orchards.
- "Conifer IPM" Come learn how to identify and monitor for the most destructive pests and diseases of Michigan's conifer tree species.
- "Communicating Climate Change" On Day 1, you heard about the science and concerns for farming with changes in climate. How do you talk about what you've learned with farmers and others in your community? Here's how to navigate a potentially divisive subject that is important for agriculture.
- "Scouting Techniques for Field Crops and Forages" Learn the basics of scouting for diseases, weeds and insects in field crops. Crop growth stages, pests life cycles, weather conditions and the date on the calendar can all impact the success of finding pests and ultimately controlling pests. Learn how each of these factors can help your success during the growing season.
- "Vegetable IPM" This session takes participants through a production year on tomatoes, peppers, eggplant, sweet corn, onions, garlic and asparagus. As we go through the year, you will be introduced to the various insect and disease pests and how best to control them using IPM techniques.
- Afternoon sessions include:
 - "Check it Out, MSU Resources for Hops, Saskatoons and Chestnuts" Interested in these up and coming Michigan crops? Then join us for this introduction to these cropping systems and available MSU Resources to help get you started!
 - "Deciduous Tree IPM" Come learn how to identify and monitor for the most destructive pests and diseases of Michigan's deciduous tree species.
 - "Emerging Issues in Field Crop Pest Management/Resistance" Each growing season presents a new set of challenges. In recent years, resistant pests have threatened productions systems. In this session, participants will learn how resistance develops and discuss management

practices that can decrease the risk of developing resistant strains. In addition, participants will learn what weeds, insects and diseases are positioned to pose a threat to Michigan field crops.

- "IPM in Small Fruit Crops" In this session we will focus on spotted wing drosophila, fruitworms, beetles, and common disease of small fruits including blueberry, strawberry, brambles.
- "Vegetable IPM" This session will guide you through a production year for vine crops, legumes snap beans and peas and cole crops with emphasis on insect and disease identification and IPM control. The session will conclude by exploring emerging IPM challenges and opportunities in vegetable crops resulting from changing conditions and technologies.

Agricultural educators and consultants will receive a complimentary IPM bulletin of their choice. For more information on what these sessions include, please visit the [IPMA13 registration](#) page.

The cost of this program is \$225. **Registration is open through February 12**, but space is limited so [register today](#). For more information, or to request a paper registration form, please contact [Erin Lizotte](#) at 231-944-6504.

This program was developed with support from the [Sustainable Agriculture Research and Education \(SARE\)](#) program, which is funded by the [U.S. Department of Agriculture — National Institute of Food and Agriculture \(USDA-NIFA\)](#). USDA is an equal opportunity provider and employer.

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THE CHANGING LABOR LANDSCAPE, HOW WILL FARMS SURVIVE?

As labor supplies tighten and change, farmers are looking for ways to "think outside of the box" when it comes to labor and labor management.

Posted on **January 29, 2013, MSUE News**, by **Stan Moore**, Michigan State University Extension

Following the 2012 disaster in tree fruit crops that required far fewer migrant laborers, and the continued wait on immigration reform at the federal level, farmers in Michigan are concerned about a changing labor landscape. Growers depend on a reliable labor pool of workers that normally come back to a specific farm year after year, and after last season, growers are wondering if workers will return following a year with no crop.

In 2010, immigrants made up 13 percent of the U.S. population, but 16 percent of the labor force, [immigrants includes naturalized citizens, legal permanent residents, temporary migrants (including H-1B workers and students), refugees, asylum seekers and, to the extent to which they are counted, unauthorized immigrants]. In 1970, the proportion of immigrants in both the general population as well as the labor force was five percent. Since that time, there has been a substantial overall growth in immigrants, but since 2000, most of the growth in immigrant contribution to the workforce came in the first half of the decade when immigrants represented 67.7 percent of the labor force. From 2005-2010, the immigrant contribution to labor force growth shrunk to 41.5 percent.

Industries, such as agriculture, that are reliant on immigrant labor (over 20 percent of the workforce employed in agriculture is immigrant labor) are certainly affected by decreased growth in the immigrant workforce. This decreased growth coupled with the lack of need for immigrant labor in 2012 have resulted in area growers facing a changing labor landscape and the need to reposition agriculture in the current labor market.

Growers are looking at how they can more efficiently work with Michigan agencies that help them connect with migrant labor, how they might better use more local labor, how they can improve the way they manage labor and how they can position their farms to be attractive to migrant labor.

Growers also face all of these challenges with the need to be efficient with their resources on the farm as well as remain in compliance with all the legal requirements.

[Michigan State University \(MSU\) Extension](#) is working with growers in this important area of their business. The 2013 efforts began with the [Growing Michigan Agriculture Conference](#) on Jan. 24 which included a talk by Dr. Bernie Erven, Professor Emeritus of the [The Ohio State University](#). Dr. Erven's presentation on "Recruiting, Hiring and Keeping Topnotch Labor" is available online.

MSU Extension is also conducting a number of [Agriculture Labor Programs](#) across the state in the coming months. The first of those programs is being held at the Northwest Michigan Horticulture Research Station on Feb. 20, 2013 from 8 a.m. to 3:30 p.m.

At this program, growers will be challenged by MSU Extension, Farm Bureau, Michigan Workforce Development Agency, Immigration and Citizenship Enforcement, and local grower speakers to "Think Outside the Box" in the labor management area, while assuring labor law compliance.

For more information on the Feb. 20 program and to register, please contact the [Northwest Michigan Horticulture Research Station](#) at 231-946-1510. Registration cost of the program is \$10 and will include lunch. This program is also being financially supported by a donation from Cherry Republic to the Northwest Michigan Horticulture Research Foundation. **Please call to register by Feb. 18.**

Look for information on additional MSU Extension agriculture labor programs in Michigan in the weeks to come, or contact [Stan Moore](#).

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ORCHARD and VINEYARD SHOW TALKS POSTED

For those that are interested in this year's NW Michigan Orchard and Vineyard Show talks, they are now posted at <http://www.cherries.msu.edu/presentations.htm>

MICHIGAN SPRING PEACH MEETING SCHEDULED FOR MARCH 5

Attendees of the 2013 Michigan Spring Peach Update will learn ways to improve their profitability with educational sessions and discussions on growing, packing and marketing high quality peaches and nectarines.

Posted on **January 31, 2013, MSUE News**, by **Bill Shane**, Michigan State University Extension



Peach growers are always looking for ways to improve their profitability. The [2013 Michigan Spring Peach Update](#) is the best annual meeting in Michigan to learn about this crop. The meeting will be held

Tuesday, March 5, at the [Michigan State University Extension Southwest Michigan Research and Extension Center](#) with registration starting at 8 a.m. and the program starting at 9 a.m.

The meeting will focus on fresh market peaches including new peach varieties, insect management strategies, disease control, marketing strategies, rootstocks, farm marketing and mechanical peach thinning. Special guests include peach specialist Dr. [Greg Reighard](#) of [Clemson University](#), award-winning peach grower Robert Fralinger of Bridgeton, N.J., [National Peach Council](#) Director Kay Rentzel, MSU entomologist Dr. [John Wise](#), and MSU plant pathologist Dr. [George Sundin](#). Download the [agenda](#) for the full list of speakers and their topics and start time. Attendees will be eligible for credits toward their recertification of their Michigan pesticide applicators license.

Deadline for early registration is Monday, Feb. 25. Registration is \$30 per person or \$25 for current [Michigan Peach Sponsors](#) members, with catered lunch included. Registrations mailed after Feb. 25 or at the door are \$5 more per person. To pay in advance by check or money order, please download the [registration form](#) and mail with payment by Feb. 25. After this time, you may register at the door with check, money order or cash. Credit cards will not be accepted.

An important part of the meeting will be talks by Reighard and [Chalmers Carr](#), South Carolina grower and owner of [Titan Farms](#), that'll focus on peach orchard mechanization and orchard design. Two relatively new blossom thinners, the tractor-mounted Darwin thinner and the Cinch handheld thinner, are changing how peach growers manage their plantings. The Darwin thinner has plastic strings along the length of a long revolving pole that remove blossoms, thereby reducing crop and increasing fruit size. This device requires a flat, narrow peach canopy in order to do effective blossom -thinning. The Cinch, developed by Michigan native Phil Miller, uses the same concept, but with a shorter pole with a cluster of plastic tubes, the unit mounted on a hand-held, battery-powered drill.



Left - The Darwin PT250 blossom thinner on a lift tractor can reach sides and tops of peach trees.

Right - The handheld Cinch thinner can be used to remove blossoms from hard-to-reach peach branches.

The Cinch, although slower and more labor intensive than the Darwin, is handy for blossom thinning more traditionally shaped open-center and central leader trees because the operator can reach inside the center of the tree, which the Darwin misses. At the Spring Peach Conference, Carr will describe the experiences and refinements made by his crew with the 18 Cinch thinners they used in 2012.

Also at the meeting, Reighard will talk about blossom thinning strategies and how to train peach orchards to take advantage of the Darwin string thinner. Current orchard systems in favor for use with the Darwin are the perpendicular Y and the quad tree, both systems with scaffolds tilted into the drive row. The tricky aspect of the Y and the quad trees is training the trees to produce scaffolds at the

proper height and orientation. Poor quality, slow growing trees are a big problem for producing Y and quad trees. Typically, the newly planted tree is headed at 1.5 to 2.3 feet from the ground to get side branches. A poor tree will be reluctant to push enough limbs to get good ones in the right position.

For additional meeting information or assistance, contact the conference coordinator, Bill Shane, at 269-944-1477 ext. 205, or 269-208-1652 (cell).

The [Southwest Michigan Research and Extension Center](#), 1791 Hillandale Road, Benton Harbor, Mich., ([view map](#)), is located 2.5 miles east of I-94 exit 30 (Napier Avenue), approximately 4 miles southeast of Benton Harbor/St. Joseph, Mich. Numerous accommodations are available close by at I-94 exits 23, 27, 28 and 29.

This meeting is sponsored by the [Michigan Peach Sponsors](#), [MSU Extension](#) and the Michigan Society for Horticultural Science.

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GET POINTERS ON HOW TO START A WINERY FROM THOSE THAT HAVE DONE IT

Prospective winery owners can learn from the experiences of established winery operators as part of the Michigan Winery Development pre-conference on Feb. 13.

Posted on **February 1, 2013, MSUE News**, by **Joanne Davidhizar**, Michigan State University Extension, Michigan State University Product Center

Being part of Michigan's growing winery industry is an exciting and romantic goal to many, but starting a winery is a great deal of work. Taking into account financial, legal, marketing, and product development considerations, a winery is a fairly complex business. The winery owner has some key decisions to make: where to locate, to buy or grow grapes, what kind of tasting room to have and more.

Fortunately, the industry has evolved with healthy levels of collaboration such as in the formation and maintenance of the state's promotional wine trails. Many a winery entrepreneur has been mentored by a colleague or helped someone get started. Of those who participated in the 2009 [Michigan State University Extension](#) Winery Development Conference, 86 percent indicated that networking with successful winery owners had met one of their objectives in learning about the business.

Doug Oberst, a partner in one of Michigan's newest wineries, 12 Corners Vineyards, is one of three panelists who will give tips and share experiences as part of the [Michigan Winery Development pre-conference](#) on Feb. 13 held in association with the 2013 Michigan Grape and Wine Conference. "I've got a list of things to talk about," says Doug. "Starting this winery has really been a process!" Oberst will be joined by Linda Utter of Flying Otter Winery and Heather Price of Sandhill Crane Vineyards.

The pre-conference will be held 9:30 AM to 3:30 PM at the Kellogg Hotel and Conference Center; Michigan State University, East Lansing, MI 48824. Sponsors are the Michigan Grape and Wine Industry Council, Michigan Department of Agriculture and Rural Development, and Michigan State University Extension, Michigan State University Product Center, Michigan State University Institute of Agricultural Technology, and Viticulture and Enology Science and Technology Alliance (VESTA) will provide basic information about starting a winery in Michigan.

For more information or to register for the session, go to: www.michiganwines.com/conference. The pre-conference registration fee is \$100 per person. The full conference **Feb. 14-15** is open to those who wish to learn more.

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2012 INSECT ACTIVITY AND ITS EFFECT ON 2013 FRUIT MANAGEMENT PROGRAMS – PART III

The effects of the 2012 weather will impact apple maggot levels for the 2013 season.

Posted on **January 30, 2013, MSUE News**, by **Larry Gut**, Michael Haas and Peter McGhee, Michigan State University Extension, Department of Entomology

The spring frosts determined whether or not fruit was going to be produced in a given apple orchard last year (2012), but how the orchard was managed will determine the likelihood of having an issue with some of our annual pests, particularly the apple maggot.

The adult stage of the apple maggot is a small, picture-winged fly that if left unchecked will produce progeny that readily infest a crop of apples. The immature stage, or maggot, tunnels throughout the flesh of the apple, making it unsuitable for consumption. The maggot exits the apple when it is finished feeding. Apple maggots spend the winter in the soil or duff on the orchard floor as brown-colored pupae, the final growth stage before emerging as adults.

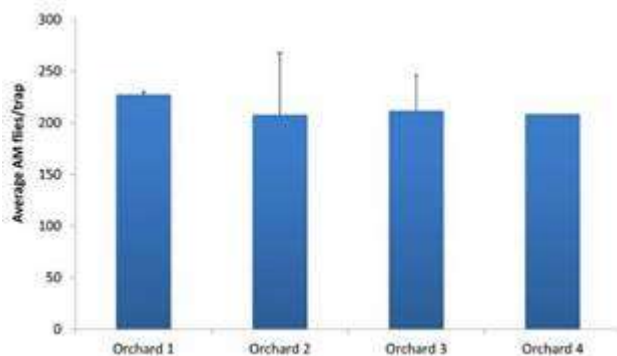


Apple maggot adult.

Fly emergence is temperature and moisture dependent, usually occurring when about 900 degree days base 50 degrees Fahrenheit (DD50) have accumulated (late June or early July) and the soil has been moistened by rain. Peak fly emergence occurs between 1,400 to 1700 DD50, generally in late July through mid-August. A mated female fly will puncture the skin of the apple, deposit an egg, and generally move on to other apples, depositing a single egg in each fruit. An individual female may deposit upwards of 300 eggs.

Captures of apple maggot flies in Michigan orchards have increased over the last five years, and 2012 was no exception. Despite the dry summer, apple maggots emerged in force this past year. For example, catches in four southwest Michigan orchards where we conducted research in 2012 averaged over 200 flies per trap (Figure1). This is greater than a five-fold increase in the average catch in southwest orchards of 36 per trap we recorded in 2011.

Figure 1. Average seasonal apple maggot (AM) captures in four southwest Michigan orchards that had insecticides applied through third cover only, 2012.



Apples were often left unsprayed in 2012, especially in the southern part of the state where crop load was severely reduced. Left unchecked, emerging flies roamed the orchards for several weeks. Furthermore, fruit were left hanging on the trees throughout the fall, attracting the attention of female flies. In sampling orchards in the southwest and Fruit Ridge area, researchers at [Michigan State University Extension](#) noticed that many of the unprotected apples were infested with apple maggot larvae, often with multiple entries per fruit. The ripening apples no doubt served as ideal food and housing until each maggot dropped from the apple to the ground to pupate, where it lies in waiting for the proper temperature and moisture cues in 2013, signaling that it is time to emerge. Thus, we anticipate high apple maggot activity in the coming season, especially in orchards where summer insecticides were not applied.

Flies typically have to re-infest orchards from adjacent woodlots and areas with hosts such as hawthorn or feral apples. In addition to immigration from outside habitats, growers in 2013 should expect resident orchard populations where unprotected fruit remained on the tree in 2012. Border applications of insecticides will not be an effective management option in these cases. In fact, it could be two years before the resident orchard population is lowered, as a portion of the apple maggot pupae stay in the soil for a second year.

Predicted high apple maggot pressure this coming summer increases the need to monitor for this pest and protect the fruit at the proper time. Adult activity can be monitored using yellow sticky panels with ammonium bait or a red sphere trap covered with an adhesive and baited with synthetic fruit volatile. The yellow trap is most useful during the pre-oviposition period when newly emerged females are actively feeding. The red sphere trap mimics the ripening fruit that flies are attracted to during egg-laying, and is effective throughout the season.

Comparisons of the two trap types in Michigan have revealed that the red sphere baited with fruit volatiles is the most effective in catching the mature female apple maggots that are seeking egg-laying sites in commercial orchards, consistently catching three to four times more flies. Optimally, traps should be checked twice weekly starting just before 900 GDD base 50 F until the first fly is captured, then once a week thereafter to indicate the end of the flight.

In determining control treatment timing, on-farm fly catches should be used in conjunction with regional trapping information. If you employ a good trapping program, a control treatment for apple maggots is not warranted until flies are captured on your farm. If flies are trapped on-farm and a regional catch was recorded prior to the on-farm fruit fly capture, the treatment should be timed based on the earlier regional capture. This conservative approach is the best way to ensure that the control is applied prior to egg-laying. Once the first fly has been captured, there is a seven to 10 day period before eggs are laid. During this time, females are searching for nutritional sources needed to become sexually mature. Chemical control of apple maggots is focused almost entirely on the adult, with the goal of preventing egg-laying.

Apple maggot control traditionally has been achieved with organophosphate insecticides like Guthion and Imidan. A summer Guthion spray for apple maggot control would be a good option in 2013 for

growers fortunate enough to have remaining stocks of this phased-out material. Synthetic pyrethroid compounds like Asana, Warrior, Danitol, Battalion, Mustang Max and Baythroid XL are also toxic to adult fruit flies, but are generally viewed to be only moderately effective because they have a shorter field residual. The first treatment with all of these contact poisons should be timed for the start of egg laying a week to 10 days after the first flies are captured.

There are several new reduced-risk and OP-replacement insecticide products available for apple maggot control. The neonicotinoids Calypso, Belay, Provado and Assail are labeled for apple maggot control. The Spinosyn compounds Delegate and Entrust, and the diamide Altacor, are active on apple maggots, but are labeled for suppression only. Unlike the older contact poisons, these new chemistries are primarily active on apple maggot flies when ingested. Thus, treatments should be applied closer to the first fly catch in traps. This will ensure that female flies consume a lethal dose before they begin depositing eggs. The neonicotinoid insecticides provide additional "curative" activity on apple maggots, based on their plant-penetrative attributes that can kill eggs and larvae post-infestation.

Related MSU Extension articles

- [*2012 Insect activity and its effects on 2013 fruit management programs – Part I*](#)
- [*2012 Insect activity and its effects on 2013 fruit management programs – Part II*](#)

Dr. Gut's work is funded in part by [MSU's AgBioResearch](#).

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GET UP-TO-DATE PESTICIDE LABELS, LABELING, AND SAFETY DATA SHEETS FOR 2013

Looking to do a pesticide inventory before the 2013 season starts? Here are some resources for pesticide labels and material safety data sheets.

Posted on **January 30, 2013, MSUE News**, by **Diane Brown**, Michigan State University Extension

If you didn't already get it done last fall, now is a good time to do a pesticide inventory and look at the quantities and condition of what is on hand and determine what needs to be ordered for the upcoming growing season. [Michigan State University Extension](#) recommends that when looking at old pesticide stocks, you should check to make sure that the label is attached to the container and is legible. Make sure that if you need to replace a label it has the same information as the original.

Labels can change from year to year, and legally you can't replace an old label with a more current one that has different information. Replacement labels can be obtained from the pesticide dealer where you bought the product, or online at several websites including:

- [Greenbook](#)
- [Crop Data Management Service](#)
- [Agrian](#)

All of the websites work a little differently, but labels, supplemental labels and material safety data sheets (MSDS, recently renamed SDS, or safety data sheet) can be obtained free of charge from these sites. You will need to have labels and any required supplemental labeling in your possession. Assembling a loose-leaf notebook with a set of all the labels for pesticides in your inventory or making electronic copies of the labels and storing them on your computer is a good idea.

It is also necessary to keep a set of SDS' at the workplace for all products considered to be hazardous substances and keep them in a location where they are accessible to all workers. SDS' provide the

information needed to respond effectively to situations involving daily worker exposure or emergency situations. (Read the full text of [Michigan's Employee Right-To-Know Law](#).)

The SDS lists the content of the product and if any of the ingredients are subject to specific regulations. It also identifies special precautions that should be taken when storing, using and disposing of the product. Employers must maintain a written hazard communication program including container labeling, employee access to SDS and hazard notification. Employers must ensure that each employee receives training to impart basic knowledge of how to find information on an SDS and how to properly make use of that information.

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TIMBER TAX WORKSHOP

The Otsego Conservation District (OCD) will be hosting a free Timber Tax Workshop on **Wednesday, February 20th**. If you are a logger, landowner, or farmer who has bought or sold timber in the past 3 years, or plan to harvest timber, then this is a must see session.

Keep more money from your timber harvest!

Susan Metcalfe, of Metcalfe Forestry & Burns Timber Tax Service, will cover a range of topics involving your potential taxes on the money earned by buying and selling timber, how to keep more money in your pocket and pay less in tax.

Susan will also cover myths common in the forestry and accounting communities, explain about the capital gains treatment of the purchase and sale of timber, and give valuable tips on how some loggers can drastically reduce their regular income and tax liability and how some landowners can pay no tax on their timber sale revenue.

Susan has presented various SFI, SFE, FISTA certified and other classes on Timber Taxes to loggers, landowners, accountants, and foresters through the Association of Consulting Foresters, the University of Wisconsin Extension, AgStar Financial Services, the Northcentral Wisconsin Land Stewardship Conference, the Great Lakes Timber Professionals Association, the Forest Industry Safety & Training Alliance Inc, Michigan Conservation Districts, the Michigan Association of Timbermen, and the Michigan Forest Association.

The meeting will take place from 6:00PM to 7:30PM in the Multi-purpose room on the 1st floor of the Alpine Center. No reservation is required, but they are appreciated in order to ensure a complete availability of handouts.

For more information about this workshop, or to reserve a spot, contact Justin Burchett by calling (989) 732-4021 or by emailing jburchett@otsegocountymi.gov. Further details are also available at www.otsego.org/conservationdistrict and www.facebook.com/otsegocd/events.

Justin Burchett is the Huron Pines AmeriCorps member at the Otsego Conservation District and the Environmental Education Coordinator for Otsego County.

Huron Pines AmeriCorps is a program of Huron Pines and is supported in part by the Corporation for National and Community Service, Michigan Community Service Commission, Huron Pines and contributions from host sites. Huron Pines is a nonprofit 501(c)3 organization and an equal opportunity provider.

WEBSITES OF INTEREST

Insect and disease predictive information is available at:

<http://enviroweather.msu.edu/homeMap.php>

60 Hour Forecast

<http://www.agweather.geo.msu.edu/agwx/forecasts/fcst.asp?fileid=fous46ktvc>

Information on cherries is available at the new cherry website:

<http://www.cherries.msu.edu/>

Fruit CAT Alert Reports have moved to MSU News

<http://news.msue.msu.edu>