

Ohio Fruit ICM News

Editor: Shawn R. Wright
Ohio State University South Centers
1864 Shyville Rd., Piketon, OH 45661
Phone (740) 289-2071 extension 120
E-mail: wright.705@osu.edu

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In This Issue

Comments from the Editor

The Influence of Rootstock on Apple Size

6th Annual Ohio River Valley Farm Marketing Conference

OSUE & Tri-County Beekeeper's Association 30th Annual Beekeeping Workshop

High Tunnels 101

Calendar

Ohio Poison Control Phone Number

Comments from the Editor

I want to thank everyone who responded to the Ohio Fruit ICM News Zoomerang. Response rate was what we have had in the past so I feel comfortable with the results. The majority of growers who responded say that the newsletter saves them \$100 - \$500 a year primarily through improved pest management decisions. When I spoke with some of you at the Growers Congress, you also expressed a desire for more information about what is happening with pest development down in southern Ohio. So we are combining the two thoughts and we hope to be able to offer some scouting data from southern Ohio this year. We are still working out the details, but I hope to be able to pull this off. I also hope to be able to provide this newsletter on a more regular basis so you know when to check your mail. The way the program is set up, if the email gets bounced back as undeliverable the system will automatically unsubscribe you. I try to add people back in the first time that happens, but if it happens a second time, I don't. If you have limited email capacity, you may want to print off the newsletter or save it to another file and then delete the previous issues.

It isn't too early to make sure you are ready to hit the ground running when the weather breaks. One of the details we always try to get done ahead of time is sign up for our freeze/frost forecast service. I'm not a trained meteorologist, and we have enough invested in our strawberry research trials that we can't risk losing our crop. There are several sources that you can use. Just consider it a cost of doing business. Feel free to contact me if you have questions.

Have you checked with your local beekeeper to make sure you will have as many bees as you need at the time you need. I haven't heard yet about large losses among beekeepers but there is still a lot of winter to get through before the bees can forage on their own.

The Influence of Rootstock on Apple Size by Rich Marini, Dept. of Horticulture, Penn State University (Source: Fruit Times Vol. 27, No. 1)

Over the past couple of decades, buyers have been demanding larger fruit. To obtain large fruit, growers can grow varieties that obtain large size, manage crop load carefully, and minimize stresses that suppress cell division and cell expansion. Pomologists have long known that fruit size is negatively affected by heavy crop loads, and the relationship between fruit size and crop load is usually linear. Field observations in grower orchards sometimes indicate that some rootstocks may produce smaller fruit than other rootstocks. When I was in Virginia, several growers told me that they felt that trees on M.16 produced larger fruit than trees on M.9. However, it is difficult to determine the true influence of rootstock on fruit size because it is difficult to thin all trees to similar crop loads under commercial conditions. Since trees on M.9 often produce more flowers, they are not often thinned properly and this could influence fruit size.

To compare rootstocks, fruit researchers often use statistical techniques to adjust fruit size for the crop load, but there are theoretical problems with the way these techniques are often used. While analyzing data from the 1994 rootstock trial, it became obvious that the range of crop loads often observed in our trials may not be adequate to properly adjust fruit size data. Therefore, in the spring of 2003 an NC-140 trial was established at 8 locations designed specifically to determine if rootstocks influence fruit size. The variety is 'Golden Delicious' and the rootstocks include G.16, M.9 NAKBT-337 and M.26. In 2005 trees were de-fruited to ensure a large bloom in 2006, when the first crop load treatments were applied. In 2006 each tree was hand thinned to a predetermined crop density (number of fruit per square centimeter of trunk cross-sectional area) to obtain a wide range of crop loads for each rootstock, and at harvest, the number of fruit and yield were recorded. In 2007, blossom counts were recorded to determine the effect of crop load and rootstock on return bloom, but these data have yet to be analyzed. These treatments will be repeated in 2008 to determine if tree age influences these results and if the results are repeatable.

This discussion is based on data from the four-year-old trees and should be considered somewhat preliminary. Data were analyzed using modern analysis of covariance techniques to answer the following important questions.

1. Is the relationship between fruit size and crop load the same for all three rootstocks? This will tell us if all rootstocks should be thinned to the same extent.
2. Is the relationship between fruit size and crop load the same at all locations? This will tell us if trees should be thinned differently in different regions.
3. Is the relationship between fruit size and crop load for a given rootstock dependent on the region of the country. This will tell us if we should be thinning particular rootstocks differently in different parts of the country.

Results from 2006 indicate that the relationship fruit size and crop load is influenced by the combination of rootstock and location, so it is very difficult to interpret the data. In general, average fruit size declined by 4 to 6 grams (0.14 to 0.21 ounces) for every additional fruit per square centimeter of trunk cross-sectional area (TCSA). We usually feel that young trees should be thinned to a CD of about 6. To put this in perspective the difference between 100 count fruit and 97 count fruit is 0.21 ounces per fruit. So, for every one fruit/cm², we lose about 3 count sizes. The biggest influence on fruit size was for G.16 at British Columbia, M.9 at Chiwawa, Mexico and M.26 at Kentucky, where fruit size declined by more than 10 grams (0.35 ounces) per fruit/cm² TCSA. However there were situations where fruit size was not influenced much by CD and these included G.16 at Kentucky, M.9 at New Jersey, G.16 at Ontario, and M.26 at Utah. At those locations, fruit size was reduced by less than 2 grams ((0.07 ounces) per fruit/cm² TCSA. At most locations, trees on G.16 produced the smallest fruit. The largest fruit were harvested on G.16, M.26 and M.9 at 25%, 38%, and 38% of the locations, respectively. We are gathering information on climatic conditions to try to help explain some of these confusing results.

Dr. Rob Crassweller is one of the cooperators in this trial and his planting is located at Rock Springs. Below are the predicted fruit weight in grams and the corresponding box sizes for three crop densities. A crop density of 2 corresponds to a very light crop, 6 corresponds to a near optimum crop, and a CD of 10 is seriously over cropped.

Rootstock	Crop Density (fruit/cm ² TCSA)			Crop Density (fruit/cm ² TCSA)		
	2	6	10	2	6	10
	Average fruit wt (g/fruit)			Box size (fruit/42 lbs)		
G.16	185	164	143	103	116	133
M.26	202	180	160	94	106	119
M.9	195	164	163	78	116	117

These results show that at low crop densities M.26 had the largest fruit and at high crop densities M.9 had the largest fruit. In addition, it is easy to see that fruit size is influenced least by crop load for M.9. Based on this one year of data, it seems that in Pennsylvania G.16 requires heavier thinning than the other two rootstocks, and that M.26 produces good size fruit at low and at moderate crop loads. We will present results from the next phase of the trial in two years.

6th Annual Ohio River Valley Farm Marketing Conference

Agricultural leaders from Indiana, Kentucky, and Ohio have partnered to organize the 6th Annual Ohio River Valley Farm Marketing Conference, which is to be held February 19-20, 2008 at the Roberts Convention Centre in Wilmington, OH. Registration is \$50 for two days and \$40 for one day.

This two-day event was developed for producers involved in all types of direct marketing who are looking for new or additional marketing strategies. Participants will experience a variety of presentations, workshops, and discussions, focused on directly marketing agricultural products to the consumer.

This year, three breakout session tracts are being offered on the following topics: "Local Food Trends," "Marketing Your Product," and "Meat Product Marketing." Additionally, there will be a trade show for participants to network and gather useful information.

On Tuesday evening, the conference will kick off with the "Taste of Regional Cuisine" reception where a sampling of products produced in the tri-state area will be provided with producers and food purveyors available to discuss the elements of a successful buying arrangement.

For a complete agenda, more information, or to register, visit the conference website at <http://directmarketing.osu.edu/orvfm/> or contact Joy Bauman at (740) 289-2071 ext. 111 or jbauman@ag.osu.edu. Please register by Tuesday, February 12.

Ohio State University Extension & Tri-County Beekeeper's Association 30th Annual Spring Beekeeping Workshop

It will be held in Fisher Auditorium and the Shisler Center at the Ohio Agricultural Research and Development Center (OARDC), Wooster Ohio on Friday and Saturday, February 29 & March 1, 2008. Last year there were 650 people from around Ohio and neighboring states who participated in the workshop so get your registration in soon! Pre-registration deadline is February 26th. Pre-Registration - \$35.00 per person
Day of Registration - \$45.00 per person, Youth (17 & under) - \$5.00 ea. A hot lunch is available for \$10.50, a boxed lunch for \$6.75, or there are restaurants nearby.

On Friday evening, February 29, at Fisher Auditorium, you will have a choice of Dr. James E. Tew speaking on "Honey Bee Nutrition – Is It Adequate?" or Joe & Suzan Kovaleski on "How to Make an Award Winning Candle" from 7:00 to 8:00 p.m. The "OSU Beekeeping Museum" will be open from 8:00 to 9:00 p.m. The evening program is included in your registration. On Saturday, March 1, the workshop will start with the keynote address and three workshop sessions which will have six different breakout topics for a total of 18 from which to choose. One of the breakout topics in each of the three sessions will be a Beginner Beekeeping Session and another will be a Kid's Session open to kids 5 – 12 years old and will offer an educational influence through fun activities.

Other activities during the day include Baked Goods Contest, Guessing Contest, and Door Prizes to be given throughout the day. There will be a "Learning To Do Room" which will include assembling frames, supers, and other "hands-on" activities.

For more information call 330-263-3684 (if no answer, please leave message), fax: 330-263-3912, e-mail: ferrell.6@osu.edu, or write: Sherry Ferrell, OSU Honey Bee Lab, 1680 Madison Ave, Wooster, OH 44691. **Information about the workshop is also on the website at: www.beelab.osu.edu**

High Tunnels 101: Only two more sessions left!

Want to extend your growing and marketing seasons? Protect your crops from cold, wind, and rain plus certain pests and diseases? Make more money in the process? High tunnels can help you. Learn how they work, where to buy them, how to build them, their benefits, drawbacks, and more—the ABCs of what you need to know before you start—in this introductory half-day course.

Feb. 15, 1 p.m.- 5 p.m. Granville, Ohio 43023 Contact: OEFFA Office, phone: (614) 421-2022.

March, 7, 1 p.m.- 5 p.m. Village Administration Building, Plymouth. Contact: Steven Prochaska, phone: (419) 562-8731 or prochaska.1@osu.edu

Pre-registration is encouraged. Send a check or money order for \$20 per person to the Contact person/address listed for your specific date/location. Make checks payable to The Ohio State University. Registration at the door (\$25) will be based on available seating.

For more information Contact the instructors [Matt Kleinhenz](#), Vegetable Crops Specialist, Dept. of Horticulture and Crop Science, (330) 263-3810, [Brad Bergefurd](#), Extension Educator, Horticulture Program, OSU South Centers at Piketon (800) 297-2072, ext. 136, or [Ron Becker](#), Extension Program Assistant, OSU Extension, Wayne County (330) 264-8722.

Calendar - Newly added in ***Bold***

Jan. 29-31, Mid-Atlantic Fruit and Vegetable Convention, Hershey Lodge and Convention Center, Hershey, PA. For More information Contact William Troxell 717-694-3596.

Jan. 29-31, Annual meeting of the North American Strawberry Growers Association will be held in conjunction with the Mid Atlantic Fruit and Vegetable Convention (above), and the National American Bramble Growers meeting (below). For more information: Kevin Schooley at kconsult@allstream.net or visit www.nasga.org.

Jan 29-31, North American Bramble Growers Association Conference, Hershey Lodge and Convention Center, Hershey PA. For more information contact: Debby Wechsler, 1138 Rock Rest Rd. Pittsboro, NC 27312, nabga@mindspring.com.

February 11-12, Ohio Grape & Wine Conference, Shisler Conference Center at OARDC in Wooster.

February 16-17, 29th Annual OEFFA Conference, Granville, Ohio. Featuring keynote speakers Joel Huesby (farmer and mobile livestock processor, co-sponsored by IFO) and Dr. Kamyar Enshayan (local food activist), along with nearly 50 workshops, locally sourced organic food, kids' conference, child care, trade show, Saturday evening entertainment, and more. For more information contact Laura Wies at 614-421-2022.

Feb. 19-20, Ohio River Valley Farm Marketing Conference. Roberts Convention Centre in Wilmington, OH. Registration is \$50 for two days and \$40 for one day. For a complete agenda, more information, or to register, visit the conference website at <http://directmarketing.osu.edu/orvfmc/>.

Feb. 20-21, Ontario Fruit & Vegetable Convention, Brock University, St. Catharines Ontario. For more information go to <http://www.ofvc.ca>

February 29-March 1, Ohio State University Extension & Tri-County Beekeeper's Association 30th Annual Spring Beekeeping Workshop OARDC, Wooster. For more information call 330-263-3684 or e-mail: ferrell.6@osu.edu. Information about the workshop is also on the website at beelab.osu.edu

March 14, Agricultural Linked Deposit program closing. Applications and a list of participating lenders are available on the Ohio Treasury Web site at www.ohiotreasurer.gov.

March 25-27, 20th Anniversary SARE Conference. Registrations made after March 1 require a late fee and must be made online or by telephone. All registration closes March 19. Requests for refunds due to cancellation must be received in writing by March 1. Refunds will not be issued after March 1. Contact Lorie Bousquet or Ryan Overstreet at (573) 882-8320 or muconf3@missouri.edu with questions about registration.

NOTE: Disclaimer - This publication may contain pesticide recommendations that are subject to change at any time. These recommendations are provided only as a guide. It is always the pesticide applicator's responsibility, by law, to read and follow all current label directions for the specific pesticide being used. Due to constantly changing labels and product registrations, some of the recommendations given in this writing may no longer be legal by the time you read them. If any information in these recommendations disagrees with the label, the recommendation must be disregarded. No endorsement is intended for products mentioned, nor is criticism meant for products not mentioned. The author and Ohio State University Extension assume no liability resulting from the use of these recommendations.

Ohio Poison Control Number

(800) 222-1222
TDD # is (614) 228-2272