Inside

FFF 97-13
October 15, 1997

Crop Conditions

The past couple of weeks have brought unusually warm and dry weather to the state. Fruit crops that were delayed all season rapidly progressed. Fall bearing raspberries suffered from heat and lack of moisture. Fruit size is small and flavor and quality are reduced from earlier harvests. Despite what we thought after the freeze back in April, the apple crop has been pretty good across the state. We are in the middle of Red Delicious harvest at the moment, and although a few growers have a very light crop, there are also many good crops of Reds around the state. Maturity of Reds needs to be watched - we have noticed here at Purdue, and others have also reported that fruit are maturing quite slowly and are taking awhile for the starch to be converted to sugars. The varieties with the lightest crops tend to be the triploids such as Mutsu. We started the season about 10 days late and that has pretty much continued through the harvest season. The first frost is forecast for mid-October, about one week later than normal for the central region.

Memorial: June Alexander of Columbus, Ohio passed away on September 24, 1997 and was buried near her home of Milton, West Virginia. She was 69 years old. June served the eastern fruit industry as a representative of some of the largest and best tree and small fruit nurseries in the U.S. She sold millions of fruit plants to growers in the Midwest. June attended hundreds of fruit trade shows representing Stark Brothers, Bountiful Ridge, Nourse, Carlton, VanWell and other fruit nurseries. The Horticultural Association meeting of Virginia, West Virginia, Maryland, Ohio, Indiana, Michigan, and Pennsylvania we all "home" during the fall and winter months. During her career many miles were traveled to orchards to assist growers in planting and growing fruit plants. Farm size was no concern; she measured the people in the industry by the work of their hands, by how they could make a living for their families and by their trust in one another.

A scholarship and research fund was established by her at The Ohio State University in 1989. She held a high regard for the future of the industry, and was well aware of the impact of research and education in the industry. She traveled to England in 1985 and visited research stations, advisors and growers. June understood the current and future potential of a new and dynamic industry.

As a person, June possessed a high level of courage, charm, and compassion along with a great sense of humor. She knew where she wanted to be and how to get there without alot of fanfare. She was unique part of the eastern fruit industry and her impact was far and wide. She will be missed because she was one of us.

Cider: Many of you have received the new consumer education brochure about fresh (that is unpasteurized) apple cider published by the U.S. Apple Association. The brochure can be used to comply with a recent Food and Drug Administration's (FDA) request that cider producers voluntarily provide warning information to consumers. "The fresh apple cider industry is working very hard to address its new food safety threat and put this period in cider's long history behind it," said Julia Daly of the U.S. Apple Association. "While the risk is likely low, right now it just makes sense to provide consumers, especially those most vulnerable to food borne pathogens, with advice on how to protect themselves and still enjoy

cider." I agree that it seems like a wise move to take the opportunity to educate the public about the risk. Obviously there is a fine line between being a responsible producer and raising undue fears. I believe the answer lies in the facts, rather than emotion. Yes, let's tell the consumer that there is a risk, but let's also tell them how small that risk is.

FDA inspectors have also been visiting a number of cider producers around the state. By all accounts, they have been very thorough and professional. The fact that these inspections have been taking place should be viewed positively by producers rather than as a negative event. From the results of these inspections we will know for sure exactly the magnitude of any problem and exactly where it is entering. The first step in solving any problem is to identify precisely what the problem is and where it is occurring, so we should be thankful that the FDA is performing these inspections. For those producers who have been inspected, please would you send copies of the inspection reports to Peter Hirst at the address listed on the back of this newsletter - it would be useful to have a record of how we are doing across the state.

Fall Chores: Fall is a good time for taking care of those problems you noticed all summer and said you were going to do something about. In the last issue we discussed soil management and cover crops, control of perennial weeds, and herbicide applications. This is a great time to get those things done. If you are planning a new planting for next season, take advantage of the dry soil conditions and subsoil the site as deeply as possible. Adjust the soil pH with lime, make fertilizer additions (especially P and K) and incorporate those materials as deeply as possible. Disk the area and get a cover crop established before the end of October to assure adequate soil coverage and reduced erosion potential. Take care of those other odds and ends; the broken trellis posts, leaking irrigation system, and so on. Remember, when April rolls around you won't have any spare time on your hands.

Fall Weed Control for Small Fruits: Fall is the most important time to apply herbicides in berry crops. As we reminded you in the last issue, there are several advantages to fall herbicide applications. Dry soil conditions in the fall allow for equipment travel without compaction, weather conditions are more stable giving you greater flexibility in application times, and there is less likelihood of heavy rains to cause runoff, but good chances of adequate rains to incorporate the herbicides. Also, weed problems are still fresh in your mind, so you can tailor your herbicide program according to weed problems you had this season. Regina Rieckenberg recently wrote a very good article on fall weed control in small fruits in the Small Fruit News of Central New York Newsletter. Here is a condensed version.

Strawberries:

On new or established strawberry plantings the small weed seeds you see germinating right now will winter kill if they are summer annuals (galinsoga, lambsquarters, purslane, ragweed, pigweed, Pennsylvania smartweed, velvetleaf, crabgrass, fall panicum and foxtails). If they are winter annuals (chickweed, wild mustard, henbit, field pansy), you may want to apply a very light rate of Sinbar now. It's legal 6 months after planting and has some activity on emerged weed seedlings. Be sure to apply it before a rain or wash it off the leaves with irrigation. See more below about Sinbar. Devrinol could be applied now as well if adequate runners have established. It has no activity on emerged weeds. Applying some of the Sinbar or Devrinol now rather than just before mulching will take away from how long they will last next spring.

Weed seeds that have dropped onto the strawberry field and are waiting to germinate are the primary reason for fall herbicides. The standard program for both first year and established strawberries is to apply 8 lbs/acre of Devrinol plus possibly some Sinbar. Devrinol controls annual grasses and some broadleaf weeds (chickweed, knotweed, groundsel, lambsquarters, pigweed, purslane and pineapple weed). It gives some suppression of nutsedge. It doesn't control weed seeds that have germinated. The label says that it must be washed in within 24 hours after application or it will break down from exposure to sunlight. This is not that critical this time of year. Under conditions of high sunlight, slightly over 50% is broken down by the sun within 4 days. Under winter conditions, the loss is approximately 30% within 8 days. The ideal timing for Devrinol is the fall. It doesn't volatilize

and is resistant to leaching, so it's there and ready to provide weed control through harvest next spring.

You may also want to apply some Sinbar. Sinbar should not be used on soil with less than 1% organic matter, nor on eroded soil areas. Lower rates should be chosen for soils with 1-2% organic matter. Sinbar should not be applied on weak or diseased strawberry plants. Caution should be used on Kent, Midway, Micmac, Bounty, Earlidawn, Annapolis and any new cultivars due to Sinbar sensitivity. Sinbar's strengths are chickweed, lambsquarters, mustards, crabgrass, foxtail, prickly lettuce and shepherd's purse. Basically, it broadens the spectrum of activity that you get with the Devrinol. The amount to apply depends how much was applied at renovation ... the annual maximum is 8 oz/acre. If you applied 5 oz/acre at renovation (for example) then you could apply 3 oz/acre now. If you think that you may be able to get onto the field in the spring, then that is actually the better time for Sinbar. It is quite leachable in soil and may be washed out by next spring.

Perennial broadleaf weeds such as dandelion are the toughest things to control in strawberries. If they have gotten a foothold, then it's definitely worth trying fall 2,4 D applications. Do it on a warm day once the strawberry plants are fully dormant (usually late November), but the weeds are still growing. There are other perennial broadleaf weeds getting established which will grow in the spring. These include sheep sorrel and butter and eggs. You may seriously want to consider hand weeding these out now. Perennial grasses (i.e., quack) can be suppressed with Poast, and fall is a good time to do it, but it doesn't do much if the seed heads have formed, and you can't use it within six weeks of a Sinbar application It's probably just as good to wait until next spring.

Raspberries and Blueberries:

The standard herbicide program for raspberries and blueberries is a fall or early spring application of preemergent herbicides. A good approach is a mixture of 2.5 lbs/acre of Princep plus either a) 5 lbs/acre of Surflan, b) 8 lbs/acre of Devrinol or c) 2 lbs/acre of Sinbar. Solicam is labeled and could technically be an additional option to mix with the Princep, but it is expensive and plant injury is possible, especially on raspberries. If

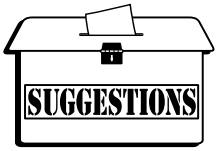
Coming Meetings

October 25 — Kentucky Vineyard Society Fall Meeting, Sullivan College, Louisville, KY. Contact Butch Meyer 606/573-5642.

November 3-5 — Blueberry Integrated Crop Management School. Kellogg Biological Station near Battle Creek, Michigan. See story above. Contact: Laurel Raines (616 429-2425), Mark Longstroth (616 657-7745) or Eric Hanson (517 355-2261).

November 5 — Late Season Apple Showcase at Clarksville Horticultural Research Station. Contact Clarksville Station (616-693-2193)

January 26-28 — Indiana Horticultural Congress. Adam's Mark Hotel, Indianapolis. Watch for registration materials in December or call us for a copy.



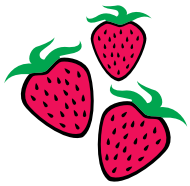
Program ideas for the winter meetings:

Please send Peter Hirst, Bruce Bordelon, and/or Dick Hayden your suggestions for topics or speakers for the winter meeting programs. We have a number of god suggestions, but need additional ones. The dates of the meetings are January 26-28, 1998 so mark your calendar.

you need slightly more broadleaf activity, use Solicam or Sinbar. To improve grass control, apply Surflan rather than Devrinol. Surflan is not recommended on high organic matter soils.

On blueberries, 2-4 lbs/acre of Kerb with the Princep is an additional option. Kerb is a good option if quackgrass is a problem. If red sorrel is a problem, try a high rate of Princep next spring while plants are still dormant. For perennial weeds, many growers use a directed spray of RoundUp. Blueberries must be dormant, so do it when 90% of the leaves are off the plants and the rest are red (usually mid November). It's still important to be very careful to avoid contact with green shoots.

On raspberries, Princep plus Surflan or Devrinol are the mixtures to use. The Princep + Surflan mixture works best if it is split in half with half in the fall and half in the spring. Princep should be used at the low rate on plants less than 6 months old. Sinbar can also be used with Princep if the plants are older than one year. However, Sinbar is very hot on raspberries, especially the variety Canby. Purple raspberries are sensitive to all herbicides. These Princep plus something else mixes give good broad spectrum control, but Casoron at 100-150 lbs/acre (high rate for perennial weeds) is an excellent choice as an alternative. Casoron is a broad spectrum granular herbicide that is quite effective if applied evenly and at the proper time. Casoron is volatile so it is best to wait until late winter just after the ground thaws (usually late February). This is a good option of you have used one of the above treatments for the last several years. By alternating between the mixes and Casoron you avoid the build up of any one herbicide. Casoron is fairly expensive.



Mulching Strawberries: If you haven't already done so you should make arrangements for your mulch supply now. Strawberries are typically mulched with clean wheat straw clean meaning that it does not contain excessive weed or wheat seeds. Any straw is suitable as long as it is heavy enough to resist blowing off in the wind and free of troublesome weeds. A good rule of thumb is that it takes 1.5 to 2 tons of straw per acre of strawberries. More is better.

Mulch should be applied AFTER several hard freezes in the high 20s or low 30s have occurred over a short period of time (a week or two). This usually occurs in mid to late December. Once these freezes occur strawberry plants will be completely dormant. It is important not to mulch too early because the plants need the exposure to cold and shortening daylength to properly harden off for winter. On the other hand you want the mulch on before sub-zero temperatures occur. One old strawberry grower that we all know claims you should apply mulch after Christmas but before New Years. That may be so, but its probably better to give yourself a little more flexibility.

Agri-Mycin(r) 17 and Mycoshield(r) Product Recall: Novartis Crop Protection, Inc. acquired Merck and Co.'s Crop Protection business in July, 1997. As a result, they will be manufacturing and selling Agri-Mycin 17 and Mycoshield products in the future. They have a concern that some production lots of Agri-Mycin 17 and Mycoshield sold in 1997 may not meet product specifications for the 1998 use season. As a result, they are initiating a total recall of Agri-Mycin 17 and Mycoshield in all package sizes.

Growers should contact their supplier to arrange for return of the material and refund of the purchase price. All grower inquiries should be directed to Novartis Crop Protection Customer Service at (800) 334-9481.

USDA Announces New Office of Pest Management: On September 8, 1997, Deputy Agriculture Secretary Richard Rominger announced the creation of the Office of Pest Management that will serve as USDA's focal point for pesticide regulatory issues. This is part of a new, coordinated approach to minor use pesticide issues that builds on existing programs at USDA and the U.S. Environmental Protection Agency (EPA). The new office is charged with integrating and coordinating pesticide issues within USDA along with improving communications with and strengthening the existing network of grower organizations and crop specialists at land grant institutions. This will help make available accurate, high quality data on pesticide use practices for regulatory decision making.

EPA's Assistant Administrator for Prevention, Pesticides, and Toxic Substances Lynn Goldman also announced the agency's newly created Minor Use Program Team. It will work closely with grow-

ers organizations, USDA, registrants and other stakeholders to obtain and use the best available data, to facilitate an open dialogue with the minor use community, and to promote the development of safer pesticides for minor uses. EPA and USDA have been working together in recent months to secure funding for the collection of additional data on children's food consumption patterns and to collect pesticide residue information through the Pesticide Data Program. These efforts are in compliance with the_Food Quality Protection Act of 1996 that requires minor use issues be handled more efficiently in a coordinated, cross-agency effort. (USDA News Release via AAPSE Notice, September 8, 1997).

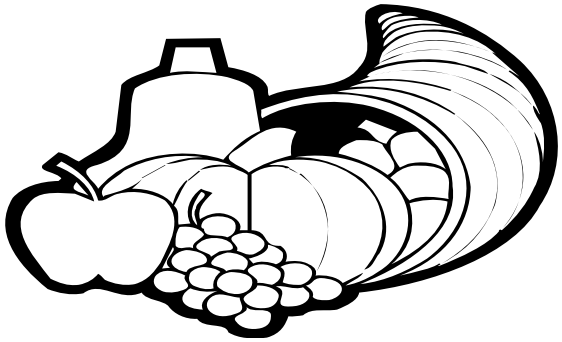
Minor Crop/FQPA Tolerance Reassessment — Phase 1: The provisions of the Food Quality Protection Act (FQPA) of 1996 require EPA to reassess all pesticide tolerances within ten years of passage of the Act. During the first phase of tolerance reassessment, EPA plans on reviewing the tolerances of the organophosphate, carbamate and B-1/B-2 carcinogen pesticides. During these reviews, EPA is required to consider risk from all sources of pesticide exposure and cumulative risk from pesticides with common modes of toxicity. In addition, the Agency can place an additional tenfold safety factor in the risk calculations to further protect the diets of infants and children.

Interregional Project-4 (IR-4) has developed a list of minor uses that will be subject to the first round of tolerance reassessment. Crops included are grown on less than 300,000 acres nationally and are grown commercially in the Midwest. The list does not include minor uses on the major crops. In addition, the list does not include seed treatment use patterns or uses that do not require a pesticide tolerance. It is extremely likely that some of these uses will be lost during the tolerance reassessment process. At this point there is no way to adequately predict which exact uses will no longer be available. Thus, all these uses must be considered at risk of no longer being available for agriculture. Because of the unknown future, it would be prudent to consider alternative pest control tools as potential replacements for these at risk minor uses. IR-4 is available to help growers of minor use crops have access to safe and effective pest control tools. IR-4's goals are to assist in new registration of reduced risk pesticides on minor crops and facilitate reduced risk use patterns for existing registrations. IR-4 will also support biologically-based pesticides and pesticides essential to IPM systems.

For additional information contact IR-4 National Director, IR-4 Headquarters, Cook/NJAES, PO Box 231, New Brunswick, NJ 08903-0231, Telephone (908) 932-9575, FAX (908) 932-8481.

Blueberry Integrated Crop Management School: Blueberry growers, consultants and educators will be interested in this in-depth program to be held at the Kellogg Biological Station near Battle Creek, Michigan on November 3-5, 1997. This is the first time MSU Extension has offered such a concentrated program on the management of insect and bird pests, diseases, and weeds in blueberries. The program will emphasize in-field identification, scouting and monitoring, and control strategies. Researchers and extension educators from Michigan and other states will provide over 20 hours of lecture covering the most current information and research on these topics.

The Kellogg Biological Station is equipped with state-of -the-art lecture facilities, dormitories, and a cafeteria so that students can sleep, eat and study on site. The registration fee of $225 covers two nights lodging, all meals, notebook and handouts. Individuals within commuting distance can register for $175, which includes everything except lodging and breakfasts. The Blueberry ICM School is the week following the MBG Marketing Blueberry Convention and Trade Show (October 29-30) and the North American Blueberry Council meeting (October 31). These events will be in Grand Rapids, less than an hour drive from the Kellogg Biological Station. Individuals from outside Michigan may want to consider attending these programs during a single trip. If you would like additional information on the Blueberry ICM School, contact Laurel Raines (616 429-2425), Mark Longstroth (616 657-7745) or Eric Hanson (517 355-2261).



Department of Horticulture
Purdue University
1165 Horticulture Bldg.
West Lafayette, IN 47907-1165

Bruce Bordelon
1165 Dept. of Horticulture
Purdue University
West Lafayette, IN 47907-1165
765/494-1301
e-mail: bordelon@hort.purdue.edu

Paul Pecknold
1155 Dept. of Botany & Plant Path.
Purdue University
West Lafayette, IN 47907-1155
765/494-4628
e-mail: Pecknold@btny.purdue.edu

Peter Hirst
1165 Dept. of Horticulture
Purdue University
West Lafayette, IN 47907-1165
765/494-1323
e-mail: hirst@hort.purdue.edu

Rick Foster
1158 Dept. of Entomology
Purdue University
West Lafayette, IN 47907-1158
765/494-9572
e-mail: Rick_Foster@entm.purdue.edu