



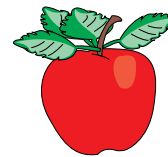
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FFF00-12
September 11, 2000

Crop Conditions: Apple crops are looking good around the state. The season continues to run 10-14 days early. 'Gala' harvest is complete in more southern areas and is continuing in the northern areas of the state. Many growers are reporting good fruit size and good fruit finish this year. Grape harvest is well underway. Quality has been very good overall, but some fruit rot problems are occurring in areas that have received significant rainfall has over the past few weeks.

Help is on it's way – Feds Moving Forward on Financial Assistance: Both the senate and house have passed separate bills providing support for fruit growers. The house bill provided for \$100 million in market assistance and \$10 million for weather related losses. The senate bill also included \$100 million in market assistance but \$60 million for weather related losses. Congress just started back in session (September 5) and a conference committee will be meeting over the next week or so to reconcile the differences in the two bills. The US Apple Association is working to have the best parts of both bills incorporated into the final version. They are also addressing the issue of who the assistance would apply to, all growers or excluding very large growers. The dollar amount that growers will receive will depend upon the number of growers who are eligible for assistance, what years it applies to (1999 or 2000 crop year) and what kind of disasters are covered. The market assistance will be in the form of direct payments to growers. We expect this to progress quite rapidly since the aim is to have this wrapped up by the end of the fiscal year on October 1. Hopefully we'll have something definite to announce in the next issue of Facts for Fancy Fruit.
-Hirst



Apple Maturity Determination: Determining exactly when to harvest can be a tricky issue. Looking at historical calendar date may get you in the right ballpark, but in a year like this one when we're running a week or more ahead of normal, you could come unstuck relying on historical averages. Many tests can be performed to measure fruit maturity, such as firmness, soluble solids concentration (also known as sugar levels or Brix), starch, ethylene, seed color, fruit skin color, etc. I don't know of any growers in the state who do all of these, and I wouldn't recommend going that far with it. If fruit are to be stored for a long period, or put into CA storage, then maturity at harvest is a lot more critical than if fruit is to be sold immediately. In Indiana, the majority of growers plan on selling fruit immediately or maybe storing it for just a short period. If this describes your situation, then taking a bite out of the fruit is a good test. An experienced taster can tell a lot from taste – sugar, starch, and fruit firmness can all be determined by

the taste test. If you are going to do one single test, I would recommend the starch-iodine test.

As fruit ripen, starch is converted to sugar. The more starch that is present in a fruit, the less ripe it is. To test for this, cut the fruit in half transversely (crossways) and either dip it in an iodine solution or spray the fruit with the solution from a spray bottle. In less than a minute, the iodine will stain the starch black. For fruit to be sold immediately, harvest when there is just a small amount of starch in the fruit. For storing fruit for longer periods, more starch should be present at harvest. Remember that the fruit will continue to respire and convert starch to sugar in cold storage – cold storage doesn't stop this process, it just slows it down.

To make the iodine solution:

Mix 10 g of potassium iodide and 2.5 g of iodine in 1 liter of water – it will dissolve better if the water is hot. **WARNING:** iodine fumes are hazardous so make sure to make this up in a well-ventilated place. Your local pharmacist may be able to make up this solution for you. Keep the solution away from light in a brown bottle or wrap the bottle in aluminum foil. The solution will keep for the whole season.

Further information:

See pages 97-99 of the Midwest Tree Fruit Pest Management Handbook. www.ca.uky.edu/agc/pubs/id/id93/ch_7.htm

The Ontario Ministry of Agriculture Food and Rural Affairs also have a fact sheet on this subject online at: www.gov.on.ca/OMAFRA/english/crops/facts/88-090.htm -Hirst

Pinpoint Scab: Even though it has been dry, you never know when the rains may come, wet weather during the apple harvest period can lead to the development of pinpoint scab and other fruit infecting diseases, such as sooty blotch and fly speck. Pinpoint scab can infect fruit up to and during the harvest period if wet weather persists at this time, however, the symptoms of pinpoint scab may not show up until the fruit have been stored for several months. Late season apple scab can also build up on leaves after harvest, resulting in large quantities of primary scab spores the following season, even though a good spray program was

followed early this year. Help prevent such problems by maintaining scab fungicides in late cover sprays; also do not stop cover sprays too early. Check the label for days-to-harvest restrictions before making the final application.

-Pecknold

Collar Rot: Late summer is a good time to inspect trees for aboveground symptoms of collar rot. Look for weak trees with premature leaf reddening (especially on goldens); sparse, yellow foliage; and many small, highly colored fruit. Keep in mind that such symptoms are general stress symptoms that may be caused by a number of factors, eg. wet feet, mouse injury, trunk decay, root rot, etc. However, trees that show the above-described symptoms *and* also have a canker at or just below ground level are likely infected with collar rot. If collar rot is suspected we advise the use of Ridomil 2E in the fall after harvest. Apply Ridomil as soon as possible after harvest so it will be in place before the fall rainy periods begin and possible new infections occur. Also be sure to concentrate your Ridomil treatment on surrounding healthy appearing trees, not just trees already showing severe symptoms of collar rot. Ridomil is best used to prevent collar rot.... not cure it. –

Pecknold

Fall Small Fruit Care:



Grapes-

Grapes should be encouraged to harden off for winter by avoiding nitrogen fertilizers and supplemental watering at this time. Apply non-nitrogen fertilizers and lime as needed based on soil and tissue test results. It is especially important to maintain healthy leaves through fall to promote proper hardening. Downy and powdery mildews often build to epidemic levels on susceptible cultivars in fall. Both can cause defoliation and reduced winter hardiness so it's important to maintain protection against these diseases throughout the fall until leaves drop naturally.



Blueberries-

As with grapes, blueberry plants should be

encouraged to harden off for the winter. However, growers should continue to irrigate if dry weather persists. Fruit buds are developing now for next year's crop so it is important to avoid water stress on the plants during this time. Apply non-nitrogen fertilizers and materials for soil pH adjustment based on foliar analysis and soil tests. Apply these before fall rains begin and also before adding any supplemental mulch to the plants.



Strawberries-

Flower bud initiation occurs during late summer and fall, so maintaining good plant health into the fall is important for high yield potential next year. The recent dry weather (in some parts of the state) can significantly reduce fruitfulness next year. Irrigate to provide at least 1 inch of water per week through October. Nitrogen fertilizer should be applied in early September to bring your seasonal total up to about 75-100 lb./acre. Most growers apply about 50-70 lb. of nitrogen at renovation so the fall application should provide another 25-30 lb. This stimulates good root growth in the fall and supplies nitrogen needed for flower bud initiation. Ammonium nitrate (33% N) is a good choice for fall fertilization. If tissue analysis shows deficiencies in magnesium or boron, early fall is a good time for foliar applications of Epsom salts (15 lb./100 gal./acre) for magnesium and Solubor (3 lb./100 gal./acre) for boron. Phytotoxicity can be a problem with these materials so read the labels. In addition to fertility, controlling leaf diseases improves the ability of the plant to carry on photosynthesis and store starch in the crowns. Check fields for infestations of leafhopper or aphids. Generally, plants can take a fair amount of feeding by these insects, but heavy infestations can be a problem. For best production next year, fields should be weed free. A herbicide such as Devrinol 50WP at 4 to 6 lb./acre, should be applied in late summer to either a newly planted or a renovated planting. To be most effective, Devrinol also requires being watered in by irrigation.



Brambles-

Encourage hardening off of canes in summer bearing varieties of brambles by avoiding

nitrogen fertilizers and supplemental watering at this time. Spent floricanes can be removed now, but it's better to wait until later in the winter unless they are significantly affected by disease. Fall bearing raspberries can still benefit from irrigation in this dry weather to help maintain fruit size. Apply non-nitrogen fertilizers and lime as needed based on soil and tissue test results. If Phytophthora root rot has been identified in a field, treat the affected area with Ridomil Gold or Alliette in September or early October. This timing is important to get the material in place in the root zone before the onset of cool wet weather in the fall. –*Bordelon*

Soil Management and Cover Crops: Fall is a good time for cultivating fields, adding lime and fertilizer, and planting cover crops in fruit plantings. Cover crops can be an integral part of the orchard floor management plan. If you plan on establishing new orchards or vineyards next year, you should consider a pre-plant soil management program which includes deep subsoiling, soil pH adjustment, addition of fertilizer (especially P and K) according to soil test recommendations, and planting cover crops. Cover cropping a site the year before planting is an excellent way to increase organic matter and reduce weed problems. Several cover crops are available for fall planting, and mid to late September is the best time to plant in most areas of the state. A favorite among growers is winter rye because it performs very well under Indiana conditions. Rye not only adds large amounts of organic matter to the soil, but also suppresses the development of many annual and perennial weeds. There are several other cover crops and the choice depends on the grower's specific preferences and needs. –*Bordelon*

Perennial Weed Control: Late summer and fall is an excellent time to control troublesome perennial weeds by spot spraying with suitable herbicides. Perennial weeds tend to become established within the rows in fruit plantings because they are not fully controlled by the normal weed management program. Once established, these plants can be difficult to eliminate. Glyphosate (e.g. Roundup) is a particularly good herbicide for controlling perennial weeds in the fall. As perennial plants begin to slow growth and harden off for winter, carbohydrates are translocated to the roots for storage. Fall applied systemic herbicides will be

similarly transported to the root system which leads to excellent control. Fall application works equally well on hard to control herbaceous perennial weeds such as thistle, dock, smartweed, and morning glory, as well as woody perennials such as poison ivy, Virginia creeper, multiflora rose, mulberry, blackberry and so on. The plants do not have to be actively growing for good results but should have sufficient active leaf area to take up the herbicide. Check the manufacturer's product label for specific recommendations. NOTE: Desirable crop plants are also translocating carbohydrates to the roots and can be severely injured by fall applied systemic herbicides. Be extra careful when spot treating to AVOID ANY CONTACT with desirable plants.

–Bordelon

Fall Weed Management: Fall is a good time to do a weed survey and determine the weed problems in your plantings. This information can be used to tailor your weed management plan. There are several advantages to fall applications of pre-emergent herbicides in fruit crops. Dry soil conditions in the fall allow for equipment travel without compaction, weather conditions are more stable giving the grower greater flexibility in application times, and there is less likelihood of heavy rains to cause runoff. Fall applications provide control of winter annual weeds and can eliminate the need for a post emergent herbicide application the following spring. Though weed control from fall applications can last shorter into the following growing season than spring applications, a split application can help eliminate this problem. Several herbicides registered for use on fruit crops have a recommendation for fall or fall/spring split applications. Materials such as Surflan, Devrinol, Princep, Karmex and Kerb perform well in fall or fall/spring split applications. See ID-168 and ID-169 for complete weed control recommendations. –

Bordelon

Jerry Brown Injured: Many of you know Dr. Jerry Brown, tree fruit specialist at the University of Kentucky. In June, Jerry was seriously injured in a bicycle accident. He shattered his helmet and landed on the back of his neck, causing swelling of his spinal cord. Since the accident, Jerry's condition has improved, and he now has limited movement of his arms, and to some extent his legs. Those that know Jerry will not be surprised to learn that he is in good spirits and working hard at

rehabilitation. I know he would appreciate cards or notes – his address is 501 South Willow Way, Kuttawa KY 42055.

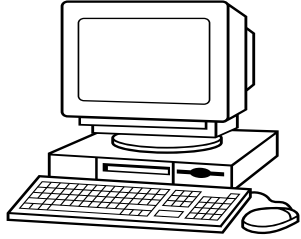


New Zealand Fruit Tour Going Ahead: The tour is on! So far about 20 people have signed up, but we still have room for a few more. The 14-day tour will leave Indianapolis on February 19 2001 and will return on March 4. The cost of \$3000 includes all travel, all accommodations, all admissions and over half the meals. This means the only additional costs participants would face are some meals, trip insurance (optional) and spending money. The strong US dollar and weak New Zealand dollar makes this a great time for us to go – your dollar will go a long way there. If you're interested in going, we need to have your registration form and \$300 deposit by September 20. For a brochure and registration form, or if you have any questions, call Peter Hirst (765-494-1323).

Indiana Horticultural Congress: Planning is currently underway for next year's Hort Congress which will be held on January 29-31, 2001 at the Adams Mark Hotel in Indianapolis. We have a lot of topics developed, but could always do with more input. If you have a burning issue you would like us to address, please let us know soon. Remember, the congress is for the participants, not the organizers, so let us know what you want.

Beginning Commercial Apple Growing: A one-day workshop for those new to the apple industry will be held on the day preceding the Hort. Congress, January 29, 2001. The list of topics will be changed somewhat from this year, so if you came this year and found it worthwhile, then next year it should be worth your time also. If you know of folks who have just started in the apple business, please would you make them aware of this workshop and ask them to let Peter Hirst know of their interest, so we can send them information about it.

–Hirst



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Coming Meetings:

October 12 Grafting workshop, Porter Co. 1.30 pm. For more information, contact Dave Yeager, Porter Co. Extension, 219-465-3555

January 16-18, 2001 Heartland Grape and Wine Coalition Short Course: Vineyard and Winery Establishment. Somewhere in Michigan. Contact Tom Zabadal, MSU Southwest Michigan Research & Extension Center, Benton, Harbor MI 49022, 616-944-1477 ext 206, fax: 616-944-3106, email: zabadal@msue.msu.edu

January 29-31, 2001 – Indiana Horticultural Congress. Adam’s Mark Hotel, Indianapolis. Watch for future announcements.



Obituary Notice

Jay Kilpatrick Jr.: A good friend of the Indiana fruit industry, Jay E. Kilpatrick Jr. died July 28, 2000. Jay was born in New Jersey on May 22, 1925. Following his education at Cornell University, he served in the US Navy during the second World War. He moved to Michigan 27 years ago and most recently was employed with the Gowan Company. Many will remember his efforts in recent years, lobbying for fairness and reason on the implementation of the Food Quality Protection Act. Our industry certainly benefited from his efforts. Jay is survived by his wife Betty, three children, and six grandchildren.

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