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Facts for Fancy Fruit 2002-11
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Crop Conditions: Hot, dry conditions have been the norm across the state the past two weeks. A few lucky folks have had occasional rains. These conditions are not all that bad for fruit growers. Disease problems are minimal. Peach harvest continues across the state and early apples and grapes are being harvested. Blackberries and blueberries are still being harvested as well.

Search for Farm Marketing Specialist Underway:

As we reported recently, Purdue received funding from a USDA Block Grant to create a faculty position for a farm marketing specialist. We appreciate the efforts of those of you in the industry who contributed to the grant application. This position will be a split appointment between Horticulture and Agricultural Economics, with a strong emphasis on extension. A search committee has been formed with representatives of both these departments. Obviously the person in this position will be involved in more than just the fruit industry, although this perspective will be represented (Peter Hirst is one of the people on the search committee). We're excited about this opportunity and we'll keep you updated as the search process continues. (Hirst)

Grape Harvest Parameters: Grape harvest is a few days behind normal this year. Early varieties will be harvested in southern Indiana this next week. Growers should be sampling their vineyards and analyzing fruit composition (sugar, acidity, and pH) to determine the appropriate harvest date. As harvest nears, sampling should be done at least twice weekly to track the progress of fruit ripening. Samples should be representative of the entire vineyard so avoid end plants and other atypical plants when sampling. As fruit ripen, sugar concentration increases, titratable acidity decreases, and pH increases. Flavor and color also develop as

the ripening process occurs. It is important to pick grapes at their peak ripeness level because grapes do not continue to ripen after they are harvested.

The level of ripeness desired at harvest depends on the variety and style of wine to be made. For light, fruity style wines, grapes are usually harvested before they are fully ripe. This is especially true with strong flavored American varieties, such as Concord and Niagara, and some French-American hybrids such as Cayuga White. When grapes are harvested before full ripeness sugar may have to be added to the must before fermentation, but the results are a lighter, fruitier wine without the overpowering 'foxy' flavor. For heavier, full-bodied wines, fruit is usually allowed to fully ripen before harvest to develop full flavor, color, and tannins. If you will be selling to a winery, keep them updated on fruit composition and let them help make harvest decisions based on their needs. Grapes for fresh consumption can be picked based on taste. Sugar/acid ratio will determine when fruit tastes best.

Sugar (soluble solids) is the easiest parameter to measure, but is not the best indicator of optimum fruit ripeness for winegrapes. Instead, a combination of soluble solids, titratable acidity, and juice pH should be considered. Of the three parameters, juice pH is perhaps the most important. High juice pH can be a problem with certain varieties especially in warm growing seasons, and causes many problems for the

winemaker. Several wine quality attributes are adversely affected by high pH including color, protein and tartrate stability, oxidative rate, metal complexing, ability to clarify, biological stability, and sensory attributes. Since pH cannot be adjusted in the winery as easily as titratable acidity or sugar content, it is best to harvest fruit within the desired pH range. Most winemakers prefer white winegrapes with a juice pH of about 3.1-3.2 and red winegrapes with a pH of 3.3-3.4.

During harvest, protect fruit quality by picking early in the day while the fruit is cool, handling the fruit carefully to avoid cracked berries, juice leakage, and potential spoilage, and keeping the fruit cool by moving containers out of the vineyard quickly and placing them in shade or cold storage. Minimize the time between harvest and crush as much as possible (Bordelon)

Strawberry Fruit Bud Development: Now is the time to fertilize strawberries fields with 20 to 50 pounds of nitrogen. Applications around mid-August stimulate flower bud initiation during the fall months. Rates depend upon amount of nitrogen supplied at renovation and plant vigor. New fields with high vigor may not need additional nitrogen now, but most older fields should benefit. Irrigation during this time is also extremely important, especially in areas of the state that have not received much rainfall. We suggest about 1 inch per week. (Bordelon)

Fall Herbicide Applications for Strawberries: A number of herbicides can be used on strawberries during late summer and fall to prevent weed germination, kill emerged weeds, and provide residue control until the following spring. The key set of weeds you need to control during this period are fall germinating winter annuals such as chickweed and shepherds purse. You may also need to control wheat, oats, or rye that come from seed in the straw mulch that you apply for winter protection.

Devrinol (napropamide) is a preemergence herbicide. It can inhibit rooting of daughter plants so it should be applied after early forming daughter plants have rooted. Late forming (after late August) daughter plants do not contribute to yield and Devrinol can be applied before these plants root. Devrinol must be applied before winter annuals and small grains emerge. Devrinol provides excellent control of small grains and some winter annuals such as chickweed. Devrinol must be moved into the soil by cultivation or water after application.

Dacthal (DCPA) is a preemergent herbicide that can be used in new plantings or immediately

after renovation. It provides good control of many grasses and some broadleaves such as purslane and lambsquarter. Like Devrinol, it must be applied before weeds emerge.

Sinbar (terbacil) is primarily a preemergent herbicide but it has some postemergence activity against small susceptible weeds. Fall applications of Sinbar should only be applied after the strawberries are completely dominant. If Sinbar is applied to actively growing strawberries, injury can occur. Cultivars differ in tolerance to Sinbar. In general, less vigorous cultivars have greater injury. Applications are most effective when applied to the soil and activated by rainfall or irrigation. Sinbar provides excellent control of many winter annual weeds. Fall applications of both Devrinol and Sinbar will persist to the following spring.

Poast (sethoxydim) is a postemergent, grass active herbicide. The grasses must be actively growing. Thus Poast should be applied in late summer or early fall before plants become dormant. Also make sure that you scout your fields to determine which grass weeds are present. Summer annual grasses, such as foxtails and crabgrass, will be killed by fall frosts, and do not require Poast applications for control. Poast is more effective against annual than perennial grasses. Poast can be used in the fall to suppress perennial grasses such as quackgrass; control early emerging small grains, and kill winter annual grasses such as wild oats and downy brome. Poast must be applied with a crop oil.

A systemic, postemergence broadleaf herbicide, 2,4-D, can be applied when strawberries are dormant to control some winter annuals. 2,4-D provides good control of many mustards and shepherdspurse, but is not very effective against chickweed. The herbicide should be applied to actively growing weeds. Be careful of 2,4-D drift causing injury to non-target plants.

Gramoxone Extra (paraquat) can be applied as a directed spray between strawberry rows, using shields to prevent contact with strawberry plants. Gramoxone is a nonselective herbicide, so it will kill or severely injure strawberries it contacts. Gramoxone is a restricted use pesticide and is extremely toxic to animals including humans. It provides excellent control of annual grass and broadleaf weeds. Gramoxone does not extensively translocate in plants so it does not control perennial weeds. Weeds should be actively growing when Gramoxone is applied.

In conclusion there are a number of herbicide options that can be used on strawberries during the fall. Select herbicides that will control

problem winter annuals and small grains. Herbicides such as Devrinol and Sinbar can provide residue weed control until spring. (Adapted from an article in the Illinois Fruit and Vegetable News by John Masiunas) (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 EXTREMELY CAREFUL when spot treating to avoid any contact with desirable plants. (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)

Irrigation of Small Fruit: With the lack of rainfall across the state it is very important to irrigate small fruit plantings if possible. Small fruit crops are generally shallow rooted and will suffer water stress if soil moisture levels get too low. We generally say that small fruits need at least an inch of rainfall each week, but this is dependent on soil type and water holding capacity. It is especially important to maintain good moisture levels in strawberries because they are developing their fruit buds now and stress at this time will have a negative effect on next year's yield. Likewise, blueberries will begin to differentiate fruit buds in September so it is important to maintain adequate moisture levels throughout the fall. (Bordelon)

Marketing Tips: Marketing tips from Jane Eckert are available via your email, and better still, it's free. Many of you know Jane from her excellent presentations at Hort Congress earlier this year. She is an agricultural marketing consultant and one of the foremost authorities on farm marketing in the country. You can sign up to be on the email list at her website which is: <http://www.eckertagrimarketing.com> I encourage you to take advantage of this opportunity and tap into of Jane's expertise. (Hirst)

Upcoming Meetings:

August 15-17

North American Strawberry Growers Association Summer Tour, southern Michigan and northern Indiana. Participants will tour a variety of sites, including the latest technology in fruit production, a local fair, and Amish produce markets. For more information, contact Erin Griebe at 810-229-9407, or NASGAHQ@aol.com.

Sept. 27-28

Indiana Nut Growers Association American Persimmon Conference. For more information visit www.nutgrowers.org

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