



Healthy Fruit

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Prepared by the University of Massachusetts Fruit Team

Dr. Franklin W. Southwick

Dr. Franklin W. Southwick passed away on June 5, 2002. Frank was a member of the faculty at the University of Massachusetts for 35 years, retiring in 1983. During those years he was a huge contributor to the New England tree fruit industry. When he joined the faculty in 1948, he brought with him many “new ideas” which he developed into the commercial practices of chemical thinning, stop-drop treatments, and CA storage. His research developed the application principles for all of these practices, and he worked tirelessly with fruit growers to put them into use and transform the apple industry.

When it became known that the university orchard was to become the site for campus expansion, Frank was a catalyst among the leaders who found a site where a new orchard could be established, led a campaign to buy the site and establish the orchard, and give it to the University as a trust. This, of course, is today’s Cold Spring Orchard Research and Education Center in Belchertown.

For 14 years he was Head of the Plant and Soil Sciences Department, and in fact became its first Head when the department was formed in 1964. It was he who turned two groups of diverse faculty into a smoothly functioning academic unit.

Frank also served for many years as Secretary/Treasurer of the Massachusetts Fruit Growers’ Association and also was a trustee of its Horticultural Research Fund. Even after retiring in 1983 he continued to serve in the latter role until his death. His investment strategies for MFGA funds were legendary for their soundness and success, and under his leadership the Research Fund has grown to become a substantial contributor to research projects by fruit faculty and extension educators.

Frank’s wife Rita passed away in October, 2001, and he is survived by four sons: David, Peter, Donald, and Steve, who is a Professor of Pomology at the University of California-Davis. A memorial service for Frank Southwick was held in Amherst on June 9.

In Frank’s passing, the New England fruit industry has lost one of its most dedicated leaders, loyal supporters, and contributors to its research base.

Use Clothespins for Good Crotch Angles

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After ‘stripping’ – which was described in last week’s publication – the use of clothespins to develop wide (90 degree) and strong branch angles is the next most important young apple tree training technique you can accomplish. NOW is the ideal time to attach clothespins, when young shoots are 3-6 inches long and flexible. Clip spring-type clothespins to the tree trunk to force acute branch angles into a more perpendicular (90 degree) angle from the trunk. (See picture.) Take care not to tear the shoots from the trunk when affixing the clothespins. Clothespin all shoots with narrow crotch angles that may form permanent scaffold branches – usually 4-8 clothespins per tree are required. This is assuming you have already stripped (removed) the top few shoots competing with the leader as we described in last weeks newsletter. After several weeks, and when the new, wide branch angle is established, the clothespins may be removed and reattached out onto the shoot tip to help hold it down and keep it growing in a more horizontal position. (See www.umass.edu/fruitadvisor/clothespinrecycle.html) Take the time to train young trees with clothespins now and you will be rewarded with wide scaffold branch crotch angles that will withstand a heavy fruit load for the life of the orchard.



Calcium Supplement Builds Strong Trees and Fruit

If not already started, you should begin your foliar calcium spray program on apples soon. Adequate calcium is essential for young tree and fruit growth (it is an important cell wall component) and as you know, deficiencies result in important fruit disorders such as bitter pit, cork spot, and premature break-down. After making sure your soil is adequate in calcium (equals soil test), foliar sprays are the best way to feed your apples calcium. The general recommendation is to apply 2-2.5 lbs. calcium chloride (29% calcium) per 100 gallons dilute spray beginning three weeks after petal fall at two week intervals until mid-July, then increase the calcium chloride rate to 3 lbs. until harvest. Avoid applying calcium chloride sprays when the temperature exceeds 80 degrees F, and do not tank-mix with Solubor. Other forms of calcium may be used, such as calcium nitrate (19% calcium) or various liquid formulations, however, calcium chloride is cheapest per pound of actual calcium applied. For more information, see Fact Sheet F-119R, 'Foliar Calcium Sprays for Apples' on the UMass Fruit Advisor, <http://www.umass.edu/fruitadvisor/>.

Curculio

Ron Prokopy reports that curculio immigration and feeding/egg-laying activity has continued through last week into the beginning of this week, at fairly substantial levels. Injury on unsprayed trees has reached 60% for the season. According to the degree-day model, coverage should be maintained through the end of this week. After that, continue to monitor the 'hot-spots' to be sure that low numbers of curculio don't take you by surprise!

Border sprays should do very well at this time. In the 12 orchards monitored for Ron's curculio study, activity was substantially concentrated in the first row - 55 curculio were trapped in the perimeter row; 11 were trapped in the third row, 8 in the fifth, etc. So the overall trend is that activity drops off sharply as one moves away from the perimeter. (One exception to this general trend may be where the crop is light, and there is little or no fruit in the perimeter rows; presumably, the curculio will continue to fly in until they do find suitable fruit. Small blocks with a light fruit load should probably receive a full cover of insecticide, at least where there is enough fruit to be worth covering.)

Mites

Possibly because of all the rainy weather, mite populations have remained quite low in most locations. Continue to monitor closely until terminal bud set to be sure that they don't sneak up on you should warmer, drier weather return.

Leafhoppers

Adult leafhoppers are showing up in some orchards; these are very likely the first wave of rose leafhoppers, moving from rose to apple, although some whiteapple leafhopper adults may also be present. Neither rose nor whiteapple leafhopper will do significant damage to the foliage; the problem is later, when they are flying in substantial numbers near harvest, creating a nuisance to pickers and depositing frass on fruit. Provado or Agri-Mek used against leafminers will also control leafhoppers, but if you are specifically controlling leafhoppers, it may be better to wait till later in the season when immigration into orchards is more nearly complete.

Peachtree Borer

'Greater' peachtree borers have been flying for about a week in most peach orchards, so control measures (Lorsban or Thiodan) should be applied soon; Asana is also effective and may be less disruptive when applied as a trunk spray).

Pear Psylla

Nymphs are just beginning to hatch, so that this week would be a good time to begin controlling psylla. Split applications (10 to 14-day intervals) are recommended for most materials when controlling psylla at this time, since nymphal emergence is rather spread-out.

San Jose Scale

Now is a good time for wrapping scale-infested limbs with vaseline-coated black electrician's tape, to monitor crawler emergence. Esteem would be the most effective material at this time; Valent recommends that an adjuvant should be used with this material. Most general-use insecticides have at least some activity against scale, but the timing needs to be targeted *exactly* to crawler emergence; once the scales have begun to secrete their waxy coverings, they are difficult to contact with insecticide.

Disease Update

Although there is plenty of apple scab in unsprayed trees this year, we have only seen a small amount in commercial blocks in later fruit cluster and mid-terminal growth leaves. Control has been very good this year and we have not had a great number of heavy infection periods. Even though we are at or beyond the end of primary scab in all but perhaps the highest and coldest blocks, growers should look carefully now, before they switch to their more relaxed summer fungicide programs.