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ILLINOIS SPRAY SERVICE REPORT



Prepared by Cooperative Extension Service College of Agriculture
University of Illinois at Urbana-Champaign and Illinois State Natural
History Survey Urbana, Illinois
AT URBANA-CHAMPAIGN

SPRAY SERVICE REPORT-SPECIAL ISSUE
January 19, 1977

You are cordially invited to attend one of the following fruit grower meetings. Dr. Steve Ries, Ron Meyer, and Dan Meador will speak at each of the meetings. The 1977 Spray Schedule will be distributed.

- Tuesday, February 1 Southern Horticultural Society, St. Joseph's Catholic Church Recreational Hall, Cobden, 9:00 a.m. to 3:00 p.m.
- Wednesday, February 2 Old National Bank Building (basement meeting room), Centralia, 9:30 a.m. to 3:00 p.m.
- Tuesday, February 8 Calhoun Fruit School, Apple Shed, Batchtown, 9:30 a.m. to 3:30 p.m.
- Wednesday, February 9 Central Horticultural Society, Holiday Inn, Quincy, 9:30 a.m. to 3:00 p.m.
- Tuesday, February 15 Longhorn Cafe, Martinsville. Dutch treat dinner, 6:30 p.m.; program at 7:30 p.m.
- Saturday, February 19 Northern Horticultural Society, Holiday Inn, LaSalle-Peru, 9:30 a.m. to 3:30 p.m.

The State Strawberry School will be on Tuesday, March 1, at the American Legion Building in Centralia, from 9:00 a.m. to 3:00 p.m.

Due to the increasing interest in commercial production of blackberries, blueberries, grapes, and raspberries, a special meeting for interested growers will be held the night before the State Strawberry School. That meeting will be on Monday night, February 28, at the Langenfeld Hotel in Centralia. The Dutch treat smorgasbord dinner is at 6:30 p.m. The program will start about 7:30 p.m. The program will consist of commercial growers giving their experiences with these crops, followed by a discussion period.

Another meeting of interest to growers selling at retail is the Roadside Marketing Conference at the Holiday Inn in Collinsville on Wednesday, March 23, from 9:30 a.m. to 3:30 p.m.

BITTER COLD AND PEACH TREES

The bitter cold probably has killed most or all of the peach fruit buds. There may still be hope for the survival of some of the hardiest varieties in southern Illinois.

The survival of the trees is much more likely. The dry, cool fall hardened the trees. The consistently cold, winter temperatures have kept them dormant and winter-hardy. There will be some winter injury, undoubtedly, but we expect most trees to survive.

MOUSE INJURY

The prolonged snow cover is causing some growers to be concerned about mouse injury. We contacted Jerry Hull, Extension Fruit Specialist at Michigan State University for his comments, since Michigan growers frequently have prolonged snow cover.

Jerry said that a good mowing and baiting program in the fall before the snow arrives usually will give adequate protection through the period of snow cover. He said there is nothing that can be done to control mice as long as the snow remains. Tramping the snow around the tree trunk and putting bait on top of the snow does not help.

Jerry also said that under the snow cover, mice continue to nest in the sod areas. Thus, bare ground around the trunk is helpful even under snow cover.

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UNIVERSITY OF ILLINOIS
AT URBANA-CHAMPAIGN

If you have not subscribed for the 1977 *Spray Service Reports*, now is the time to do so. An application form is included at the end of this special report. Please fill out the form, make your check payable to the University of Illinois for \$5.50, staple it to the form, and mail to the address listed.

PEACH PROSPECTS

Growers are finding more live peach fruit buds than expected following the bitter cold weather in January. If there is no more winter kill and no severe spring frost, we could have a partial crop. We may learn more about the relative winter hardiness of the various varieties, too.

DELAY PEACH PRUNING

Pruning wounds on peach trees heal more rapidly with less likelihood of canker infection if the cuts are made after growth starts in the spring. So we suggest pruning peaches during the period from the popcorn stage until just after bloom.

NUTRITION

Apples' greatest need for nitrogen is during the early growth and fruit-setting period. To insure an adequate supply in the tree during this time, make a ground application of fertilizer four to six weeks before bloom. If you did not apply nitrogen last fall, get it on early this spring.

Through pruning and fruit harvest, considerable quantities of potassium are removed from the orchard. We suggest an application of 150 to 200 pounds of muriate of potash (60 percent K_2O) every other year on apples and every year on peaches. Adequate to high potassium levels increase the winter hardiness of peaches.

Early nitrogen application is also suggested for peaches, but an application when the leaf buds start to open is also satisfactory. At that time, we have a better idea of crop prospects and fertilizer rates can be adjusted according to those prospects.

DISEASES

Spring is just around the corner. Therefore, the first disease-control sprays will be applied soon. In an "average year," peaches break dormancy during the second week of March in Area A, and the third week in Area B. To prevent a serious peach-leaf curl problem, apply bordeaux, lime sulfur, or ferbam before the buds break. In recent years, many growers have not timed this dormant spray properly. The result was considerable curl. Don't miss this year!

Apples generally break dormancy during the last two weeks of March in Areas A and B, and during the first two weeks of April in Areas C and D. The choice of fungicides in early sprays depends on the cultivar, disease pressure, and area of the state involved.

If fire blight or black rot were problems on your Jonathans last year, consider using a cleanup spray of copper sulfate when the trees are dormant, or bordeaux at green tip.

If apple scab was a problem, control must begin as soon as the greentissue appears. There are several excellent scab fungicides. Two of these are benomyl (Benlate) and dodine (Cyprex). Benomyl- and dodine-tolerant strains of the apple scab fungus have been reported in neighboring states. Therefore, you should not rely exclusively on a fungicide, but should consider alternating fungicides and/or using registered tank mixes.

If you plan to use captafol (Difolatan 4F) this year, you should be aware of the following facts:

1. Two rates of Difolatan are suggested in our spray circular: a 3- or 5-quart rate (per 100 gallons). The lower rate should control scab until pink-bud in a normal year (three weeks), the higher rate until petal-fall (six weeks). Obviously, 1977 is not a normal year! If we encounter a long, wet, cool period between the spray application and the pink-bud or petal-fall stages, scab infections could result. Therefore, be prepared to apply additional scab sprays.
2. Don't prune trees after spraying. Many people are allergic to this material, which produces a skin rash.
3. Difolatan should be applied in combination with the dormant oil. Do not apply the Difolatan and then follow in a few weeks with the oil, because phytotoxicity can occur.
4. Apply Difolatan at or before the 1/4-inch green stage. Spraying after this bud stage can result in leaf burn and fruit russet.
5. Difolatan will only control apple scab. If powdery mildew or cedar apple rust are problems, you might consider using the 3-quart rate until pink-bud, then changing to a fungicide that is effective against these two diseases.

INSECTS

Superior oil is still an effective and economical way of reducing the overwintering of red mite eggs and scale insects. If San Jose scale has been observed in the orchard during the past two years, a thorough application should be made some time before the pink-bud stage. Using oil alone at 2 gallons per 100 gallons of water during the dormant through the 1/2-inch-green period, 1-1/2 gallons through tight cluster, or 1 gallon from tight cluster through pink will kill all of the red mite eggs and scale insects that are covered. Aphid eggs are not all killed, and hatched aphids may crawl between developing leaves and escape.

Situations have been observed where the number of overwintering red mites was low, control during the past season with predatory mites excellent, overwintering cover for predatory mites good, and scale insects absent. Such conditions would indicate a good possibility that an oil spray is not needed. Several of these situations were observed last year where no oil was used and where predatory mites kept the red mites under control easily. Mature orchards are most likely to present these favorable circumstances where ground cover is permitted to grow.

Favorable situations for tarnished plant bugs may exist if the dimples in apples or deep cat-facing in peaches have been a problem and if there are legume fields nearby or clovers or other early blooming ground cover plants in the orchard. These bugs are seldom seen in the trees, but feed on the seed in the base of the bloom. Control must be applied just before bloom. Any orchard insecticide will give some reduction, but those with the persistence to last through bloom will be the most effective. Sevin and Lannate are most effective on plant bugs, and are moderately effective on aphids. However, they are also very dangerous on honey bees, and thus should be applied at least a full day before the first blossom opens.

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