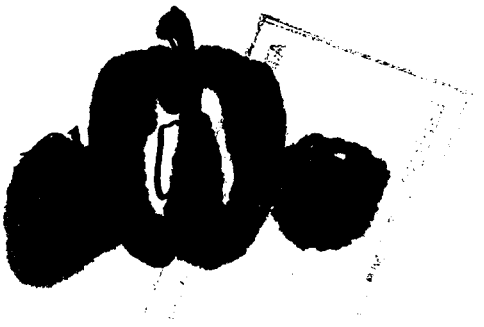
AGRICULTURAL EXTENSION SERVICE UNIVERSITY OF MINNESOTA

FRUIT GROWERS' LETTER



By Leonard B. Hertz, extension horticulturist October 1976

MINNESOTA APPLE, HONEYGOLD, PROVING TO BE A GOOD POLLINATOR

Honeygold has proven itself as a good pollinating variety for Red Delicious in Washington. At the same time, it has provided excellent quality fruit which ripens ahead of Red Delicious, according to Jim Ballard, Yakima County extension agent. Honeygold, a Golden Delicious type apple, has a harvest season 7 to 10 days ahead of Golden. It is crisp, true to type, and almost indistinguishable from true Golden Delicious. Honeygold was introduced by the University of Minnesota in 1969.

* * * *

STRAWBERRY WEED CONTROL

Several phone and mail inquiries have been received regarding fall control of broadleaf weeds in strawberries. No doubt fall growing weeds, such as the winter annual, shepherd's purse, and certain perennials such as dandelion and white clover can be troublesome. Control of these "pests" is possible with timely herbicide treatments.

Germinating and emerged (less than 2 inches tall) sprouts can be controlled with an application of Tenoran (8 lbs. of the formulated material per acre). Applications should be made early, August or September, as late season applications have not been completely successful. Several perennial broadleaf weeds, C. thistle, dandelion, and white clover, can be controlled with 2, 4-D, but applications should be made immediately after renovation and no later than August 15. Late season applications often result in misshapen fruit the following year. Diphenamid applied immediately after renovation or in the late fall prior to applying straw mulch will help control seedling grains and weedy grasses.

* * * *

ACCIDENTAL PESTICIDE DEATHS

According to a recent 3-year study by Dr. Wayland Hayes, there were 87 deaths in the United States for which pesticides were the primary cause. This compared to 111 in 1961 and 152 in 1956. In all cases the deaths involved the misuse of the pesticides. Thirty-seven deaths were children under 10 years of age. Five victims were elderly and may have been senile. At least three were intoxicated with alcohol. There appears to be a trend toward increasing involvement of pesticides in suicides as over 20 cases were confirmed in 1969.

* * * *

MEAT MEAL TANKAGE USED TO PREVENT DEER DAMAGE

Protect young fruit trees from deer browsing by using as a repellent meat meal tankage, a feed additive available at many feed elevators.

Recommended usage calls for approximately 4 tablespoons of tankage to be placed in a small cloth pouch bag with a drawstring on it to enable it to be closed and tied to a tree. This small bag should be tied to one of the scaffold branches of the young tree.

This deer repellent should last from 4 to 5 months depending upon weather conditions. Periodic visits should be made to the orchard, however, to determine the lasting effects of the material.

One source for obtaining repellent bags is Millhiser Sales Corporation, P.O. Box 7538, Richmond, VA 23208.

* * * *

POCKET GOPHERS

Pocket gophers live in an underground burrow system. Their activity can be identified by the presence of fresh mounds of dirt. Most mounds are made in late summer and fall, when gophers are digging shallow burrows to get roots, including the roots of apple trees, for the winter.

Control of the pocket gopher is effective during the spring and fall. If only a few animals are involved, hand baiting is effective.

There are two toxicants registered for use in treating bait materials for the control of pocket gophers. They are strychnine at 0.25-0.6 percent and Gophacide at 0.1-0.2 percent in the finished bait.

Two baiting methods are effective. One method involves dropping baits by hand into the underground runways. With the other method, a tractor-drawn machine called a "burrow builder" is used to make artificial burrows and automatically drop baits into them.

* * * *

MULCHING STRAWBERRIES

Strawberry buds for the spring crop are formed in the fall. Exposure of these buds to temperatures as low as 20° F seriously reduces the yield of good quality berries. Mulch plants before severe winter weather, but don't apply the mulch until plants have been subjected to a few good frosts; they help to harden them off. The time to apply the mulch varies with the season and location. Normally, early November is right in the Twin Cities area.

For mulching, use straw or marsh hay free from weed seed. Apply it to a 2- or 3-inch depth over the entire planting.

Leave the mulch on until late in the spring to hold back bloom until after frost. Check plants frequently. If leaves start to turn yellow, remove the mulch at once.

When removing the mulch, lift the straw from the rows and place it in the picking aisles. Leave some of the finer mulch materials in the row. The plants can then push up through a light covering, and the berries will be kept clean during the picking season. If a late spring frost threatens plants in bloom, use the mulch in the picking aisles to cover them.

Since the mulch covers the space between the rows, no cultivation is needed during the second season until after harvest. If weeds come up through the mulch, pull them at once.

* * * *

THE WATERCORE PROBLEM

Watercore, a nonparasitic disorder of apples, is a yearly concern to Minnesota apple growers. It affects appearance (causes water-soaked areas throughout the apple) and flavor of the apple, and frequently leads to internal breakdown in cold storage.

Although the exact cause of watercore is not known, several production factors contribute to its development. One prime factor is fruit maturity. The more mature the fruit of a susceptible variety, the more severe watercore will be. Heavy thinning, severe pruning, irrigation, and excessive nitrogen all increase the susceptibility of fruit to watercore.

Several Minnesota-grown varieties, including Red Delicious, Beacon, Jonathan, Haralson, and Regent, are subject to watercore.

Under most conditions, watercore does not develop further after the fruit is harvested. In fact, following harvest it gradually disappears, but at a variable rate depending upon the severity at harvest. However, disappearance is usually complicated, since stored apples containing watercore are also highly susceptible to internal breakdown.

The occurrence of watercore can be reduced by:

. Avoiding cultural practices that hasten apple maturity

. Harvesting apples before watercore becomes intense

Fruit with slight watercore should be suitable for long-term cold storage. Severely damaged fruit should be disposed of soon after harvest because it is highly susceptible to internal breakdown. Fruit with moderate watercore should be placed in regular storage and sold early in the storage season. If breakdown begins to develop, fruit should be sold as soon as possible to keep losses at a minimum.

* * * *

FIELD MOUSE CONTROL IS A MUST

Field mice cause serious economic loss to Minnesota fruit growers each year. In general, the mice prune the roots and/or girdle the trunk and roots. Cultural practices combined with proper application of toxic baits can reduce this damage.

Cultural practices, such as mowing ground vegetation and clearing an area around the base of the trunk, help limit the number of mice and reduce potential cover for their surface runways. Also, tree guards of hardware cloth are helpful in reducing summer and fall damage.

For control of field mice with toxic baits, use zinc-phosphide treated apple cubes. Apple cubes are prepared by cutting firm, ripe apples into 1/2 inch cubes. Place the cubes in a container and sprinkle them with one level teaspoon of zinc phosphide rodenticide to each quart of cubes. The bait should be mixed just before placement. The most effective period for application is mid-October to mid-November.

As a precaution, mix baits outside or in a well ventilated place and wear gloves. After use, carefully wash hands and all utensils. For additional information, contact the U.S. Fish and Wildlife Service, St. Paul, and ask for the leaflet titled Controlling Field Mice in Orchards.

* * * *

SUN SCALD A PROBLEM TO TRUNK OF FRUIT TREES

Sun scald is a form of winter injury to the trunks of fruit trees. Normally the injury occurs in late winter on the southwest side of the main trunk and larger branches. Bark, being brown or gray, absorbs the sun's rays in midafternoon and often warms up to 20° F above the surrounding air temperature. Increased temperature often causes the bark tissues of the tree to grow, reducing the tree's cold resistance. Eventually, the bark dries and splits, thus weakening or even killing the tree.

Shading the tree trunk, particularly the southwest side, with boards or strips of burlap will usually protect the tree from sun scald. Other methods include painting the trunk with outside white latex (waterbase) paint. The white paint helps reduce the wide fluctuations in trunk temperature during bright, sunny days. It should be applied to the entire length of the trunk up to and including the lower crotches. Coverage on the north side of the trunk is not necessary.

Apply the paint with a paintbrush, hand sprayer, paint roller, air compressor sprayer, or other method. Use the method that fits the enterprise best.

* * * *

FUTURE FRUIT MEETINGS

Minnesota-Wisconsin Apple Associations' annual meeting, Oconomowoc, Wisconsin, January 26-28, 1977.

Minnesota-Wisconsin Apple School, LaCrosse, Wisconsin, March 3-4, 1977.

Minnesota Strawberry and Raspberry School, St. Paul Campus, University of Minnesota, March 13-14, 1977.

* * * *

Leonard B. Hertz

Leonard B. Hertz
Extension Horticulturist