

County Agent Reports Farm News Briefed From The County Agent Radio Programs

By WALT JENDRZEJEWSKI
Premature death of potato vines, "early maturity disease," has been definitely shown to be caused by soil infestation with the verticillium wilt fungus.

This fungus kills vines by plugging vascular tissue with its growth. Movement of plant sap is slowed down, then stopped almost completely and the plant dies.

This fungus is reproduced by minute spores. The spores or seed germinates in soil and enters plants through roots the following season. Apparently enzymes produced by growing roots are instrumental in starting germination of the fungus spores. Tens of thousands of spores are produced within a single dead stem of an affected plant. These spores are very small. They can be seen with the aid of a hand lens, but are more clearly visible with greater magnification.

A single dry stem from a potato plant infested with verticillium wilt may harbor hundreds of thousands of these ripe seed spores.

As the broken portions of dry vines return to the soil and deteriorate the seed of the fungus remains in the soil.

Laboratory work has found hundreds of thousands of spores in a single cubic centimeter of soil, from soil samples taken in fields

where "early maturity" was prevalent.

Greenhouse pot work at OSC with soils in which controlled populations of the fungus were provided has shown that severity of plant symptoms increased directly in proportion to the number of spores present.

Soils in which density of infestation was 200,000 micro sclerotia per cc produced plants which died earlier than plants growing in soils in which density of infestation was only 100,000 spores per cc. Plant death occurred much earlier when spore density was 800,000 spores per cc.

The extremely great numbers of spores produced within stems and root stalks of potato vines clearly indicates that raking and burning of vines could be one of the most practical methods of reducing verticillium wilt troubles.

The great bulk of the spores in potato plants are found in the first eight inches of the stem. A much smaller percentage is found in the upper portions of the vine.

Since vine beaters came into wide use about 10 years ago, potato vines are no longer raked up and burned. The short sections of stem and root left after vine beating are very difficult to gather.

Vine beaters have simplified harvest but may be a major cause of a 100 cwt. per acre yield decline caused by verticillium wilt.

Coast Stream Study Planned

"Flushing"—or rate of drainage of water pollutants from nine Oregon estuaries will be studied this year by Oregon State College under a \$10,000 grant from the office of naval research.

It is the fourth \$10,000 research grant received by OSC for an extensive study of Oregon's ocean geography. Dr. Wayne V. Burt is in charge.

The new study will provide highly valuable information on rate of removal of pollutants that drain into the rivers and then into the sea along Oregon's coast. It will also provide new data on oxygen content of the water, inlets, water temperature and salinity of the state's coastal waters.

Findings of the "flushing" project will be of interest to various industries, fishermen and sports groups, engineers, cities, state and federal agencies. Little detailed information is now available on the rate of removal of the water pollutants in the coastal drainage areas.

Some rivers "flush beautifully" in the middle of the winter, Burt explained, but drainage almost stops in the summer when water gets low. Oregon's runoff tends to be highly seasonal compared to some eastern U.S. areas, he added.

Estuaries to be studied include the Columbia, Alsea, Umpqua, Siuslaw, and Nehalem rivers and the Coos Bay, Tillamook, Netarts and Newport inlets.

William Bruce McAlister, formerly in the department of oceanography at University of Washington, has been appointed to the OSC staff to conduct the new study. For his advanced work at Washington, McAlister made a study of pollution runoff in Silver Bay, Alaska.

RESEMBLE HORSES' TAILS

Mares'-tail clouds are spreading cirrus clouds which curl at the ends. The name is applied because of a fancied resemblance to horses' tails.

ered by marketing agreements and orders, adequate shipping regulations can be an effective means of prohibiting the commercial sale of low grades under a proposed marketing plan. Plans for other areas also should provide for shipping only the better qualities of potatoes, and include a means of making the marketing plan effective by obtaining full cooperation of growers and shippers.

Program operations may begin in any state or area upon USDA approval of locally developed marketing plans.

Diversion Program Outlined By USDA

A program to assist producers in marketing 1957 fall crop potatoes was announced today by the U.S. Department of Agriculture.

The program is essentially the same as that operated during the past year. It will be put into effect only in states and areas where marketing plans developed by producers and shippers are approved by USDA.

Under this program, USDA will make payments to producers on specified quantities and sizes of potatoes diverted into starch, feed and flour. The potatoes must be U.S. No. 2 or better in quality, and measure not less than two inches in diameter or weigh not less than four ounces each.

The rates of payment will be 50 cents per hundredweight to December 31, 1957; 40 cents per hundredweight to March 31, 1958; and 30 cents per hundredweight thereafter for the duration of the program. USDA emphasizes, however, that the program will be operative in any state or area only during such period as a price-depressing surplus of potatoes may exist, but in no event beyond May 31, 1958. No purchases will be made by USDA.

USDA officials said the program is designed to enable growers to market only their better quality potatoes in normal food channels, by disposing of culls and low grades in non-food and industrial uses. It will be administered locally through state and county agricultural stabilization and conservation committees.

Program requirements: A basic requirement of the program is the development of approved plans at state or area levels to market only good quality potatoes for consumers. Representatives of the nationwide industry have recommended to USDA, and USDA concurs that production on acreage in excess of the department's acreage-marketing guides (issued last February) should be withheld from commercial food markets.

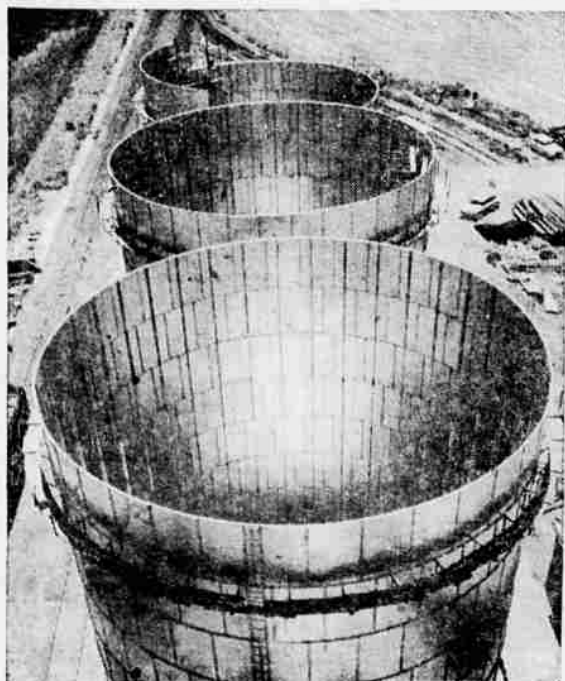
Proposed marketing plans developed at state or area levels should be sent to the Director, Fruit and Vegetable Division, Agricultural Marketing Service, U.S. Department of Agriculture, Washington 25, D.C. A requirement is that any proposed plan include a detailed analysis of the marketing situation in the state or area.

Such a plan should include: (1) a specific estimate of the quantity

that commercial outlets (fresh shipment, local food use, food processing, etc.) can be expected to take, an indication of the quantity or proportion of the crop to be diverted, and the uses to be made of the diverted potatoes; (2) a quantitative determination of the grade and size composition of the current crop; and (3) a description of the program withholding provision and how it is to be made effective.

The purpose of such an over-all program plan is to assist industry leaders in those states and areas interested in making application for a diversion program to the department in developing a clearer picture of when, where, and how the potatoes are to be marketed or diverted.

USDA suggests that in areas cov-



LOT OF CORN — These three shining new steel tanks, dwarfing the autos at right, are being rushed to completion to receive California's 1957 corn and milo crops. The 125,000 bushel tanks, being built at Sacramento, are the largest ever built in California and will serve the world ex-

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