

AGRICULTURAL EXPERIMENT STATION
Oregon State Agricultural College
Corvallis, Oregon

Wm. A. Schoenfeld, Director

Circular of Information No. 86

March, 1933

STANDARD CORROSIVE SUBLIMATE TREATMENT FOR POTATOES
by
Department of Botany and Plant Pathology

To shorten the soaking time, the Minnesota experiment station developed what is called the "Acid mercury Dip." This is described in Oregon experiment station Circular No. 66. Tests in Oregon in 1932 and 1933 showed that this method was practically as effective as the old, long soak treatment but it caused injury in a number of cases and cannot yet be recommended for general use till some means of overcoming this danger is found.

For those who wish to continue the old reliable, long soak, mercuric chloride treatment the following directions are given:

Formula

Mercuric chloride (corrosive sublimate) 4 ounces

Water - 30 gallons

Directions: Soak the uncut or whole potatoes in this solution from one-half to two hours and dry before planting.

Dissolve the mercuric chloride crystals or powder at the rate of 4 ounces to about a gallon of hot water in glass jars, stone crocks or a wooden bucket before diluting to thirty gallons. This formula makes a 1-1000 solution.

It decreases in strength with use. To correct this, add $1/2$ ounce of the chemical for every 4 bushels of potatoes treated for two hours. If treated one and one-half hours add $3/8$ ounce. Time and convenience are served if the chemical is handled in a stock solution, one ounce dissolved in two quarts of water. Keep the water in the tank up to its original volume. The solution

can be used as long as it remains clear, usually not more than seven or eight times.

If the black, knobby bodies on the tubers (the resting sclerotia of the fungus) are quite large, the tubers should be treated for two hours but usually the 1 1/2 hour treatment is sufficient to kill the fungus.

Treat tubers while dormant. The tubers should be treated while they are still dormant or before they have sprouted to any great extent. If it is necessary to treat tubers with long sprouts, the time of treatment should be reduced to 1/2 hour to 1 hour. This will reduce the danger of injury to the eyes, but of course lessens the effectiveness of control.

Caution. In using this mercuric solution it should be borne in mind that it is very poisonous, and if potatoes are once treated with it they should never be used for human consumption or for feeding to animals.

Treatment conveniently done in barrels. Mercuric chloride corrodes metals and must be used in wooden barrels or tubs, cement or wooden tanks. If the tubers are very muddy it is well to wash them before treating. The better practice is to treat the potatoes loose in the solution rather than to have them in sacks. Gunny sacks take more mercuric chloride out of the solution and weaken it.