



## ORCHARD AND GARDEN

### Late Blight of Potatoes

LATE BLIGHT makes its presence in the fields known when the vines are about 10 inches high. The disease first appears on the under surface of the leaf. The best time to detect this disease is early in the morning when the dew is still on the leaves.

At that time slight growths of white mould will be seen, which disappears as the temperature of the day increases. These growths will be found on brownish-black spots, somewhat irregular in outline and occurring in the beginning near the edge of the leaf. As the disease becomes more intense, it spreads over the entire vine. The result of this disease is early death of the vines, a small yield of potatoes and rotting in the bin of potatoes from diseased vines.

Spraying the vines prevents Late Blight. Bordeaux mixture has been found the most efficient mixture. The home-made mixture is by far better than the prepared mixtures sold on the market. Substitutes for Bordeaux mixture, such as lead arsenate and sulphur have been found unsatisfactory. Lead arsenate is slow in action and often clogs the spray nozzles.

The principle involved in the use of a spray to prevent blight is based upon the method of the spread of these diseases. The small germs, causing the blight, are blown by the wind from field to field and from plant to plant. The germs fall on the leaves and there germinate. A thin film of Bordeaux mixture on the surface of the leaf will kill the germ when it alights and thus prevents disease.

### Making Bordeaux Mixture

The usual formula for the preparation of Bordeaux mixture is five pounds of copper sulphate (blue stone) and five pounds of stone lime to 50 gallons of water. The two chemicals must be dissolved separately. The weights should be accurate. Guess work often causes more harm than good. First dissolve the copper sulphate in about ten gallons of water, and then dilute the solution to make up 25 gallons. Then in another tank make the lime before making an attempt at forming a solution. Then allow the lime to dissolve in water gradually bringing the solution up to 25 gallons. Then stir in the lime solution and pour into the copper sulphate solution. This process requires two tanks capable of holding at least 25 and 50 gallons.

Paris green can be added to the copper sulphate and lime mixture, which will kill insects. Usually from one to two pounds of Paris green for every 50 gallons of Bordeaux mixture is used. In this manner, one spraying can be made to serve a double purpose.

### Applying the Spray

An even distribution of Bordeaux on the surface of the leaves is highly important. To obtain the best results the spray machine should provide a constant high pressure and the nozzles should give a fine, mist-like spray. Sometimes 50 gallons of Bordeaux per acre is sufficient. If more is necessary it should be used when blight is severe. At least three sprayings per season should be made. The first sprayings should be carried on when the plants are eight inches high. Successive sprayings should follow at intervals of two weeks.

The use of Bordeaux not only prevents blights, but also stimulates potatoes to vines to greater starch production. This is brought about by a prolongation of the life of the vines. Three successive sprayings during one season will prolong the life of the vines for two weeks. This length of time during the most important period of the life of the vines mean an appreciable increase in yields. In years when blight has not occurred, sprayed fields have yielded a profitably larger crop than unsprayed fields.

### Summer Pruning

By E. P. Sandsten.

THE importance of summer pruning young apple trees, is little understood by many fruit growers. The habit has become so firmly fixed that all pruning is invariably done during the late winter or early spring months.

While winter pruning will always be most important, because less injury is done to the trees at this season, especially to old bearing trees, yet for the best success with young trees, summer pruning should be as regularly performed as winter pruning. After the shape of the tree has been obtained through winter pruning, the filling out of the branches and the trunk should be accomplished by summer pruning.

This is especially true during the fourth and fifth year after planting. As a rule, most fruit growers prune their young trees too heavily during these years. Growth becomes too excessive, especially in length, and the branches do not become properly braced at the bases of the tree. If summer pruning is done between the middle and the latter part of June, when the growth in length has reached from 12 to 15 inches, by cutting off the top growth, it will invariably check the growth in length and increase the thickness of the trunk and branches. Further, it tends to produce fruit spurs by checking the flow of sap.

### Thinning Fruit Spurs

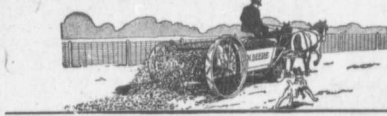
Summer pruning may also be practiced on older or bearing trees in connection with the thinning of the fruit. In this case there is very little occasion for cutting and pinching off the terminal shoots, as older trees make little or no wood growth, and cutting out a number of fruit spurs will give a larger amount of food supply for the remaining ones and the size of the fruit borne is greatly increased.

Many orchardists are troubled with over-bearing, that is, most of our trees have too many fruit spurs, and set too many fruits, making it difficult to obtain the proper size. While thinning can be accomplished by removing them after the fruit is set, is a remedy against over-bearing, yet this is less efficient than the actual removal of a certain number of fruit spurs. In cutting out the fruit spurs, they should be cut off close to the branches, and in such manner as to leave the remaining spurs well distributed on the branches.

The time for this kind of thinning or summer pruning is after the apples are well formed and the June drop is past. The operator can then gauge the number to be removed or left, without any difficulty.

A pair of light pruning shears is the best tool for this purpose.

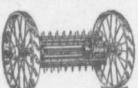
# John Deere Implements



## The Spreader with the Beater on the Axle The John Deere Spreader

The beater—the business part of a spreader—and all its driving parts are mounted on the rear axle. That is why the John Deere is the simplest, easiest running, most efficient spreader. Here is what the beater on the axle means to you:

- 1st.—No clutches to give trouble.
- 2nd.—No chains to break or get out of line.
- 3rd.—Less than half the parts heretofore used on the simplest spreader—some two hundred parts are done away with.



The Beater on the Axle

- 4th.—Manure is not thrown on the axle—straw and trash cannot wind round it.

- 5th.—You get big drive wheels and a low down spreader, with set shaft axle—least tension and strength.

- 6th.—Drive wheels back out of the way when loading—you see where you place each forkful.

- 7th.—Only hip high—easy to load.

- 8th.—Easy to operate—To start spreading, you pull back the lever at the driver's right—that's all. A boy can operate it.

Power to drive the beater is taken from the rear axle through simple gears like those used on horse powers. All the working parts are within the beater and mounted on the rear axle. They cannot get out of order.

### Get These Books—They Are Free

Every farmer who asks us about the John Deere spreader will receive, in addition to a complete description of the John Deere spreader, a valuable test book, "Farm Manure and Fertilizers," free. This book tells all about manure, how to apply it and how to double the value of each load of manure by a proper system of top dressing.

## John Deere One-Way Plow

The Power Lift Plow with the Auto Foot Frame Shift

Auto Foot Frame Shift insures uniform plowing on hillside or level land and in irregular fields. Full width furrow obtained under all such conditions. Team is relieved of all side strain.

The Auto Foot Shift is easy to operate. Foot levers are directly in front of operator, within easy reach. Slight forward movement of frame and moves plow as desired.

Easy Power Lift. Power is easy to operate and reliable. A slight pressure upon foot lever causes a lug to engage in ratchet in the hub, and forward movement of frame raises the bottom.

### All Steel Frame

This makes the plow strong and durable, light draft and neat in appearance—features not found in cast iron frame ordinarily used. Chisel attached to beam point—no pulling strain upon frame and power is applied directly to land.

### Easily Handled—Light Draft

Long and well balanced frame—adapts plow for use by either man or boy. High lift—plow easily transported over rough ground. No side draft on plow bottoms provided. Easily backed and turned.

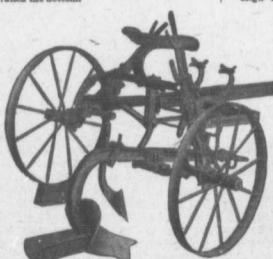
### Long Malleable Beam Clamp and Bracket

Beam securely bolted to long malleable beam. Adjustment of beam is positive. No collar, nut screws or other similar device to work loose and allow beam to get out of alignment.

### Wide Tread

Flow does not hit over on hillside. Wide bearing beam also permits use of wide or narrow cutting bottoms.

There are other superior features of this plow that we cannot improve upon when you see it in operation. We show you any farm description from which you will write us.



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