

THE POTATO BLIGHT.

The potato blight is a disease of the leaves, stems and the potato itself. It begins with blackish spots on the leaves and ends with rotten potatoes. It spreads rapidly in warm and moist weather and may appear at any time after the plants are from four to six inches high. For all forms of blight the Bordeaux mixture is considered to be the best. Galloway's formula for making and applying this is as follows:

* Pour into a forty-five gallon barrel about thirty gallons of clean water, then weigh out six pounds of bluestone or copper sulphate, and after tying it in a piece of coarse sacking, suspend the package just beneath the surface of the water by means of a stick laid across the top of the barrel. In another suitable vessel, such as a tub or half barrel, slack four pounds of fresh lime. Slack the lime carefully by pouring on small quantities of water at a time, the object being to obtain a smooth, creamy liquid free from grit. As soon as the bluestone is dissolved, which will require probably less than an hour, pour the lime milk into the bluestone solution, stirring constantly to effect a thorough mixing; add enough water to fill the barrel, stir again, and the mixture is then ready for use.

WHEN AND HOW.

Apply this mixture when the plants are about six inches high, and repeat five or six times at intervals of twelve or fourteen days. If it rains apply oftener. It is important to keep the plants covered with the mixture. Potato beetles may be killed at the same time by adding four ounces of Paris green to each barrel of the Bordeaux mixture. Thorough work must be done. The knapsack sprayer, to be fastened on the back, is a good machine for small field-garden syringes, or even a pail of water and a straw broom, will answer fairly well if plenty of the mixture is applied.

COST AND EFFECT.

It is estimated that potatoes may be sprayed five or six times at a cost of about \$6 to the acre. It pays to spray, because even in a year when the blight does not give much trouble the Bordeaux mixture will keep the plants green and thriving longer and so increase the yield.

AMONG OSWEGO COUNTY STRAWBERRY GROWERS.

(Written for FARMING by JOHN CRAIG, Ithaca, N.Y., late Horticulturist, Experimental Farm, Ottawa.)

A recent visit to the strawberry growing section in the vicinity of Oswego, N.Y., and along the shore of Lake Ontario, impressed me with the progress of specialism in fruit-growing, and pointed out important advances made in the course of the evolution of this industry. I take it for granted that strawberry-growers generally know something of the magnitude of the strawberry interests of this region. Away back in '75 this berry was grown here in a small way, marketed in boxes holding four to six quarts, and packed in huge two-men-to-handle crates. The growth of the industry received a tremendous impulse twelve or thirteen years ago, when the markets of Boston and New York were opened by means of a refrigerator car service—more or less imperfect at first, but gradually improving, till to-day, when berries are landed in Boston in perfect condition the morning of the second day from Oswego. This success has been achieved by observation and experiment. The cars are iced the day before loading, and re-iced when filled. The well-ventilated strawberry crate lends itself readily to the cooling process. It may be noted that the icing of the cars is usually overseen by a

local man who has a stake in the shipment.

CLASSES OF GROWERS.

One observes two classes of growers, viz., (1) those who grow for quantity and a general market, and (2) those who aim to produce fine quality and who cater to a personal market. The first usually has a larger area of standard varieties grown in the broad "matted row," while the second selects varieties of attractive appearance and good quality, and grows either in "hills" or "narrow matted rows." The relative profits from the two systems depend largely, no doubt, on the business ability of the manager or owner. An exceedingly handsome field, composed entirely of Marshall, was seen near Oswego. The plants were set originally 34x30 inches apart. Each plant was allowed to make four runners. The rows were not wider than 12 inches. The berries in this field were a sight to make one's mouth water, so uniformly large, glossy and handsome were they. These berries were graded, each box faced, and finally wrapped in paraffin tissue paper before being consigned to the crate. "Does it pay?" said I to the grower. "It suits me pretty well," was the answer, accompanied by a self-satisfied smile. These berries bring 10 to 12 cents when Bubach were selling for 7 and 8 cents.

SOME NEW WRINKLES.

One grower, who grew chickens as well as strawberries, found that the young strawberry bed and the young flock of chickens agreed wonderfully well together, so the chicken coops were distributed throughout the eight-acre strawberry patch of this spring's setting, and how the young Leghorns and "Plyms." enjoyed following the cultivator! This patch is an unhealthy place for cut worms and pure bug grubs.

VARIETIES.

I am informed by a prominent grower that a canvass of the strawberry growers three years ago resulted in the naming of over forty varieties. The favorites were the following in the order named: Bubach, Warfield, Haverland, Lovett, Parker Earle. Since then, says Mr. Davis, many others have come to the front; among these are the Marshall, Brandywine, Wm. Bilt and Carrie. Wm. Bilt rusts badly in some soils. Carrie and Marshall are, *par excellence*, among the handsomest and best in quality.

THE OPEN MARKET.

This is found every afternoon in the town of Oswego. There come the buyers and hither flock the non-shipping producers. The scene is original and striking. The buyers bustle round, and soon the lines of waiting sellers are broken by those who have sold making their way towards the refrigerator cars waiting on the not far distant railway track.

Strawberry growers are, as a rule, not happy this year. Large production and low prices will lessen the area and the number engaged in the business next year, but in this, as in other lines of earthly struggle, the fittest will survive.

PRINCE EDWARD ISLAND NOTES.

By A. E. MACNEILL.

The beautiful rains continue, and, as a result, everything is growing at a rapid rate. Other years our crops, especially the hay crop, suffered on account of so much dry weather, but it is entirely different this year. The rain is doing untold benefit to the potato patches, as it hinders the bug from laying its spawn and, even if it is laid, it cannot hatch only in dry weather; this will help tide the plants over the stage in which the bug hinders them so much, and once they reach the stage for hilling there will not be so much chance of damage.

The turnips and mangels are growing rapidly; and along with those, always-detestable weeds, which cause so much toil and worry. The horn fly, which has become a familiar acquaintance, has again made its appearance, though not in such numbers as last year.

The supply of milk at the cheese factories is rapidly increasing and the buildings will have to be enlarged to make room for more vats. The output bids fair to be almost double of what it was last year. The farmers are greatly displeased that binder twine is going to be a higher price this fall than last, especially since it has been put on the free list.

W. H. Pethick, V.S., Government Inspector, is addressing the farmers on tuberculosis and other contagious diseases in animals; he also is examining herds for tuberculosis.

In my next I will endeavor to deal with the subject "Farming as it has been practised in Prince Edward Island."

INTENSIVE FARMING.

By L. C. WALLACE (Wallace & Fraser), Toronto, Ont., and St. John, N.B.

A reply to Mr. MacPherson: Farmers Should Raise Their Own Stock.

The article I am called upon to answer is important, in that it calls particular attention to the very vital question of profit in farming. It does not alter the true definition of "Intensive Farming" which I gave in my first article on the subject, page 312, FARMING, May 17th, but it lays stress on the rational employment of business methods. I ask every reader of this article to read my former article on the subject, with this one as my answer.

The conclusions suggested by Mr. MacPherson's arguments, if they are sound, are either that there is a surplus of horned stock, or that they are being produced at a loss of fifty per cent. This is a serious question for stock raisers, and one which demands their earnest attention, and I hope we may hear from them on this subject. In urging farmers to use rational methods of manuring with a view of present and future economy, I have the honor to address the stock raisers, who are by far the most numerous class, as well as the farmers, who are traders and feeders. To the stock raisers I say we must, by the use of phosphate, repair the loss of "bone earth." To the buyers of cattle for feeding I say that the animals purchased from farms impoverished of their "bone earth" by cattle raising come to us "bone hungry," and utilize such a large proportion of the phos-

phate of the feed and fodders we raise, or buy outside for them, that their manure, upon which we depend, is so deficient in phosphate that we also must employ means to repair the damage to our farms.

If animals are in perfect health, and the food they take is all in such a form that they can perfectly assimilate it, and the quantity taken into their stomachs only a small fraction over what they can make use of in their systems to perform their functions, so that, in fact, there is no wasted food, the condition of their manure will simply represent the continuous waste of their systems. That waste, in such a case, does not include phosphate or bone-making material, except to a remarkably small extent. This, of course, is an impossible state of affairs, from a practical standpoint at least. What I wish to draw attention to is—that the small amount of phosphate found in stable manure is from the undigested food which is expelled. Then the unutilized balance of the phosphate of the food which returns to the farm is not some new element added to the soil. It is, as it were, the soil brought up and chewed over, and perhaps made more available for the next crops. The same may be said of the nitrogen and potash not assimilated. But, while the animal lays up in its bone and (in the case of the dairy cow) gives off in its product nearly all the phosphate it assimilates from its food, it is different as regards the nitrogen and potash. Only a small portion of the nitrogen, and none of the potash, is stored in the bone, though a fair proportion of them is given off with the milk. The largest portion of these latter elements assimilated is utilized in the fleshy and liquid parts of the animal, which are continually wasting as they are making, so that in the course of the animal's lifetime on the farm nearly all potash and nitrogen consumed is returned in the shape of excrement (manure). Of all the animals on the farm, then, the dairy cow removes the most fertility, though probably the horse removes the most phosphate and nitrogen in actual weight of bone.

Most soils that we have to deal with in farming are, fairly speaking, deficient in phosphate, and what they have is mostly in such an insoluble form that the cultivated plants we use in farming cannot assimilate it sufficiently for perfection. The result is that, no matter how much nitrogen we may add to the soil by plowing down clovers, or return to the soil by the animal manures and straw, or how much potash we may return through the manure and straw to add to the already abundant supply in most soils, these elements are not thoroughly taken up by the plants, which suffer from insufficient phosphate, owing to its being drained from the soil by the requirements of the bony structure of the animal life fed on or from the farm.

With this view of the matter before us we can readily understand the immense increase in yield, and the still greater increase in feeding value, in crops manured with an available form of pure phosphate. In this also we are able to recognize the force of Wagner's statement that clovers, peas and vetches cannot make use of the free nitrogen of the atmospheric air while they suffer for want of phosphate, but