Experiment	Varieties	Comparative value	Number of ears	Number of days until ready for table use	Table Quality: Flavor	Table Quality: Juiciness
Sweet Corn (17 tests)	(Golden Bantam	100	138	96	100	100
	(Mammoth White Cory	95	136	93	81	89
	(Malakhoff	67	126	91	75	77

Classes	Varieties	Comparative Value	Per cent. of small tubers	Mealiness when cooked	Bushels of whole crop per acre
Late Varieties (73 tests)	(Davie's Warrior	100	10	95	186.43
	(Empire State	76	13	100	135.28
Medium Varieties (101 tests)	(Burpee's Extra Early	100	10	100	170.69
	(Rose of the North	98	10	95	169.36
Early Varieties (263 tests)	(Irish Cobbler	100	10	100	170.27
	(Extra Early Eureka	90	10	96	166.89
	(Early Andes	69	10	85	134.41
	(Early Ohio	71	12	90	126.23
	(Early Fortune	69	14	91	123.46

IS TEN ACRES TOO MUCH ?

That ten acres of land is too much to work properly was the startling statement made by F. W. Krouse following J. W. Clark, of Brant Co., in a discussion on the possibilities of intensive farming in Ontario. A year ago an interesting feature of the program was G. F. Warren's account of the farm survey or census in New York State, where it was found that, on the average, men with 150 to 200 acres of land were operating more economically and deriving larger net incomes than those with smaller holdings. The executive felt, however, that there were men in this country making a signal success following intensive methods on small areas, securing liberal incomes from such lines as bees, poultry and fruit. Such a man is J. W. Clark, a brother of the Dominion Seed Commissioner, and almost as well known. Mr. Clark's experience is more or less familiar to "Farmer's Advocate" readers. At the convention he estimated, in reply to a question, that his annual net income from 25 acres would be easily $3,500 a year. He has set out a larger orchard of plums, pears, dessert apples and cherries, and sees no reason why his 25 acres should not eventually produce $10,000 a year. Having done so well, and being the father of a growing family of seven children, he has added another 25 acres.

He has reduced the labor factor to a minimum. His chickens are reared in the orchard, sheltered in fifteen colony houses made out of piano boxes, 75 to 100 young birds in a house. They are watered with a barrel and fed once a week by replenishing the hoppers. Thus fed they do not bother the fruit much even when ripe. He didn't think one per cent. of his apples were injured. His principal market for poultry is in the United States, and his customers willingly pay big prices. "Price a bird to an American at $25," said Mr. Clark, "and he thinks it can't be any good ; ask $50, and he concludes it must be worth something." Alas for Yankee shrewdness !

In spraying, he uses a power sprayer with a variable nozzle, and sprayed only twice, except on a new orchard taken over, which was sprayed three times. He thinks two thorough sprayings enough for an orchard that has been sprayed well before, but emphasized thoroughness. He didn't think one per cent of his apples this year had worms. A few close-planted Greenings had a little scab on the under side of the branches. He believed the ink spot was controlled by thinning. Mr. Clark believes he makes more money out of his bees, with less labor, than from any other branch, and he finds them a great advantage in fertilizing the fruit blossoms, almost every flower having a bee in it. Morley Pettit, Provincial Apiarist, said he had many reports telling of good fruit crops where bees were kept in the orchards and but little fruit in others. Bees are not the only insects that fertilize fruit blossoms, but bees are the only pollinating agency under the fruit-grower's control.

A rugged, stocky man is Mr. Krouse, whose story was the sensation of the convention. When he started out, he was a laborer, and left a good job at the college to go on one acre of land against the opinion of his friends. The first year he took $125 off this acre, besides keeping his house supplied with the produce of the place. He then added an acre and-a-half of rough land which had some gravel pits on it, levelled them off, and the next year made over $1,600 and the following year $2,750 out of bees, poultry and small fruit. He paid considerable for fertilizers, but nothing for labor, having done all the work himself. He then bought 7½ acres more land, but hasn't done so well accordingly since. He cannot secure satisfactory results from the hired help and can't work ten acres properly himself so as to get the most possible out of it. During the past year his income was derived as follows :

From 100 colonies of bees he took 11,000 pounds of light honey, which retailed at 15 cents, bringing	$1650
And 2,000 pounds dark honey, which brought	178
An increase of 80 colonies he valued at	240
From his asparagus bed, of which only 3,000 roots were cutting, he realized	200
Currants and cherries	50
Poultry (above feed, etc.)	250

Four hundred bags of potatoes remain to be sold, which should bring the total to over $3,000. Most of that came from the 2½ acres. He has had a boy to do chores, but no experienced help, and is willing to sell half his land and work the rest alone. It means work, though, for his average hours are daylight to dark, and in the honey flow has worked all night. In previous years he has also worked in the winter, dealing in raw furs. So far, he says, he has never been tired. A strenuous life truly, but remarkable as an indication of possibilities from small areas.

G. A. Robertson, of St. Catharines, who owns 70 acres of land not in town, has come to the conclusion, after fifteen years of fruit-growing, that he knows nothing about fruit-growing and less about poultry, but more about real estate than some of the men who are in it. He has, nevertheless, had asparagus net $300 per acre, and cherries yielding at the rate of $2,000 to $3,000 worth of fruit per acre, but he feels that is the wrong way to figure. His ambition is rather to make the poorer trees come near the productiveness of the best ones.

BIG RETURNS FROM ALFALFA.

Not only through bees, poultry and fruit are ampler returns possible. Geo. W. Putman, of Lincoln Co., Ont., gave an impressive account of what Niagara Peninsula farmers are doing with alfalfa on hard clay lands. Thirty years ago, or upwards, a couple of small importations of alfalfa seed were made, and the area has gradually increased ever since. Here are some instances of very profitable yields from hard clay land, valued in the neighborhood of $50 an acre.

Case No. 1.—12-acre field, four years seeded, cut this year, at the first cutting, 25 tons ; at the second, seven—making a total of 32 tons. The field is divided by a creek.

Case No. 2.—A nine-acre field, seeded five years, cut in 1910, 12 and 9 loads, and in 1911, 15 and 10 loads at the first and second cuttings respectively. Besides this, 12 head of stock were pastured for six weeks and a good top was left. In 1912 this field produced 38 tons in three cuttings. At $50 an acre this field would be worth $450. The 38 loads of alfalfa at the ruling price of $15 per ton would be worth $570 or $120 over the value of the land. It is but fair to add that the owner values this field at $100 per acre, surely within the mark.

Case No. 3.—[illegible] has a 15-acre field, which three years ago cut 21 and 6 loads in the two cuttings, besides pasturing 8 cows for a month. In 1911 this same field cut 15 loads of hay, and the second cutting yielded 12 bushels of seed worth $150. In 1912 the owner plowed about one acre and planted to potatoes and had as good a crop of tubers as he ever grew. The remaining five acres yielded 14 loads of hay last year.

Case No. 4.—A 15-acre field yielded in three cuttings for each of two years an average of 2, 1½ and ¾ tons, or 4¼ tons per acre per annum. It received no manure or fertilizer in 15 years, and at the end of that time was producing better than at the beginning.

All through this country, concluded Mr. Putman, are clay belts, which under alfalfa would double and treble in value. "It would surprise you to know what they are doing with alfalfa in the heart of the Niagara district," added Prof. Zavitz. "People there have told me one after another that without alfalfa they would not attempt to farm." A travelled expert told him that in the Niagara Peninsula we had the best alfalfa section in the eastern part of North America.

C. Witz, of Oxford Co., added a word for sweet clover, which he grows in a two-year rotation of beans and wheat, getting a lot of pasture after the wheat, and a foot and-a-half of growth to plow under the next spring.

POTATO CANKER IN CANADA.

Despite all the warnings which have been issued, it seems the dread potato canker has established itself in Canada. There is reason to believe, said Prof. J. E. How tt, speaking to this subject, that a large quantity of European seed potatoes were planted this past year and that the disease may have gained a foothold. The fear was corroborated by T. G. Raynor, who told of one case where English potatoes had been sold as Manitobas. He saw a field in Russell County where the inspector had been through and discovered the disease.

It seems the potato canker was discovered in Hungary in 1896 and in England in 1901, 244 cases having been reported there in 1908. It was discovered in Newfoundland in 1909 by H. T. Gussow, now Dominion Botanist. It is pretty well spread over Europe, having infested some fields to such an extent that it is practically impossible to grow potatoes.

Badly diseased potatoes show misshapen lumps of warty growth and become wholly inedible. Less seriously infected ones will have slightly protruding rusty-brown eyes, with small aggregations of nodules. It is a fungus di ease introduced through planting diseased potatoes. The fungus is easily brushed off infested tubers, and a few may thus infect a whole bag. Once in the soil it will remain there for a period variously set at six to eight years. There are no remedies yet known, though remedial measures consist in :

(a) Destruction of diseased crops ;

(b) Heavy applications of unslacked lime to infested fields ;

(c) Dropping potatoes out of the rotation. The Dominion Government h s now f rbid len the importation of European potatoes.

SOME GOOD RESULTS FROM FERTILIZERS.

The possible deception of averages was the great point emphasized in the discussion which took place on results of co-operative experiments with fertilizers on farm crops, vegetables and fruits, reported by Professors Zavitz and Harcourt. In the case of fertilizers particularly so many variations occur in the nature and condition of soil, its previous enrichment and cropping that every farm, yea, every field even, becomes a law unto itself, and a system of fertilizing which may prove very profitable under one set of conditions may prove unprofitable under others apparently similar. Averages of a hundred experiments might, and commonly do, conceal the fact that a fertilizer may be applied with large profit in a percentage of the cases, though in others at a small profit, or even at a loss. The economy of fertilizers becomes, therefore, preeminently an individual problem, something for each man to study out, experimenting for himself on his own land. This is not to deny the advisability of averaging the results of experiments conducted. It merely warns against the publication of such averages unaccompanied by an idea of the range of results and some explanation of the conditions under which the most profitable returns may have been secured.

For the present, just a word as to the results. For twenty years co-operative tests of fertilizers have been conducted by members of the Union. The tests were conceived with a view to simplicity. While securing this one point, the plan has, however, been criticized as imperfect, and in 1910 a more elaborate ten-plot experiment with fertilizers on barley was introduced. Seven plots received commercial fertilizer, one lime, one cow manure, and one was left as a check plot. For the seven plots receiving commercial fertilizer, nitrate of soda, superphosphate, and muriate of potash were used singly and in combinations of two and three. The quantities of nitrate of soda