

SHEEP AS ASSISTANTS TO THE APPLE GROWER.

An address given at Grimsby Park, before the fruit growers and farmers of Ontario, by J. S. Woodward, Lockport, N.Y., by special request of the Association.

Apple growing is one of the most important branches of horticulture in our country and yours. There is no way in which the same amount of land will yield the same amount of human food as by planting an apple tree upon it; and there is no food that is better for mankind than the apple. Consequently, it is to you and to us one of the most important branches, not only of horticulture, but of farm husbandry.

My theme suggests, first, that the apple grower is in trouble and needs assistance. Is it true, or is it not? Nine-tenths of the orchards that are planted nowadays are planted on old soil. Not content with that, the orchardist continues to crop them year after year, removing crops of apples and other products.

Now, in doing this, he has taken from the land the elements that are necessary to the production of apples. One hundred barrels of apples take away thirteen pounds of nitrogen, seven pounds of phosphoric acid and seventeen pounds of potash, and no part of this is ever returned to the land from which it was taken. And that is not the worst, because the poorer the fruit, the more of these elements do you take away. They exist mostly in cores, stems and seeds—the flesh of the fruit is almost all water, so the poorer the fruit the larger the waste of these elements. The leaves take more of these three elements than the fruit; and the leaves are nearly all blown away, so that no portion of these manurial elements go back to the tree.

In coming along in the train this morning, instead of the rank, strong growth and thick, dark-colored leaves which indicate health, I noticed in so many places that the leaves were small and yellow, showing that something is lacking. Worse than that, a large part of the orchards were growing grass and hay. The trouble is, men are too avaricious. They have cropped their orchards, removing crops of grain, grass or vegetables and crops of fruit, and returning very little, if any, manure to the ground to replace what has been taken away, thus literally starving the orchards to death. Years ago we expected a crop at least every two years; now we are happy if we get a crop once in four or five years, and the fruit is diseased and eaten up by insects. Surely the apple grower needs assistance. From what I have said you can easily see that the greatest need in the orchard is fertility in the soil. The question is, how shall we give it. How can we manage to get back the fertility which has been taken away from year to year? We can make the tree healthy and productive by the application of commercial fertilizers, but the question is, can we afford to do it? Every ton of commercial fertilizers bought mortgages our crop to the extent of the cost of it.

There is nothing better for the orchard than the ordinary stable manure; but can we afford to apply even this, if we have to buy it? If we buy stable manure we just as surely mortgage the prospective crops, and before we can get any profit we must pay the mortgage. Is there not a better way? We shall see.

There is another principle involved, and that is, that two bodies cannot occupy the same space at the same time. This is true in the orchard. We cannot grow two crops in our orchard at the same time. As the result of cropping it with grass, the hay robs the trees, and they succumb to the evil influences of the grass. Either cut down the trees and crop the land with something else, or else keep off the other crops and devote the whole to apples. Apples and other crops cannot be profitably grown upon the same field at the same time.

If an orchard be kept in complete and thorough cultivation, it is too expensive. If we attempt to keep the weeds cut down, that, too, is expensive; so you see we are in a dilemma. Sheep, if properly kept in the orchard, will keep down the weeds and grass, eat the fallen apples and the sprouts, and add very materially to the fertility as well.

Orchards are continuously over-run with insects, which are multiplying on every hand, and are more destructive than ever. Among them are the caterpillar, codling moth, maggot, army worm, borer, etc. We have on our hands a very persistent fight. By using the spraying pump with insecticides and fungicides, we can subdue many of

them, but cannot destroy up, the assistant know. them to if they as the variety which a balance faithful

W sheep. and fifth meal. hundred

all I ha

By

cides I

sprout,

all that

greatly

dred an

potash a

meal co

orchard,

it would

keeping

put just

support

to the g

I w

It costs

in the b

Two

or two a

make on

tains on

phospho

tains one

and thir

pounds o

dred an

turage of

\$5.43, I

I ha

Here we

contain s

barrels.

potash e

all this b

I ha

healthy,

leaves ar

good app