

if fruit will not pay to buy fertilizer for, we had better dig up our trees by the roots and plant something else.

TRY LUCERNE CLOVER.

The next question would be, "What shall we use?" Those who are situated near towns can buy stable manure, but for the majority of farmers this is impracticable. Even in favorable cases it is doubtful if for large fruit it will pay for the reasons given above. In some cases, as with small fruits, poor land, or where a proper system has not been followed, it may be desirable for a time to use stable manures, but the successful farmer must get his nitrogen cheaper than paying 12 to 16 cents a pound for it, and he can obtain it for nothing by means of a leguminous cover crop. Of all the different crops advocated, I believe Lucerne clover to be the best, as it will make a better growth in the dry weather, which we usually have in the fall, and also a better root growth than the common red clover, which is favorably known for this purpose. Lucerne is subject to being winter-killed, but this makes little difference where it is sown to be plowed under in the spring. The hairy vetch is also highly recommended for this purpose. Don't sow too early in the season. Remember that it is a full apple barrel rather than a luxuriant cover crop which is wanted. I believe that in dry seasons the fruit grower loses an enormous amount by stopping the cultivator too soon, and as a rule cover crops should be sown a month later than usually advised. Never sow a cover crop until you feel sure that the apples are safe, even in case no rain comes until picking time. This system might not produce such a fine cover crop, but will produce more apples.

Leguminous cover crops will provide all the nitrogen necessary, but something else is required or we will ruin our fruit crop through unbalanced feeding. I firmly believe that the popularity of cover crops,

together with the use of stable manure, has had much to do with the cry that Canadian apples are not keeping as well as they did in former years. We all know that an excessive amount of stable manure will grow a large, pale, soft apple, lacking in color, flavor, long-keeping qualities, and that indescribable element often called "snap," for which Canadian apples are noted. I know for a fact that dealers are beginning to keep records in order to find where the poor keeping apples come from. Thus we see we can provide ourselves with an abundant supply of nitrogen and humus, but we can not get in that way the potash and phosphoric acid which are also needed.

USE COMMON SENSE.

Experiment stations recommend a fertilizer containing 2 per cent. of nitrogen, 9 per cent. of potash, and 2 per cent. of phosphoric acid, but if a proper system of cover crops is followed I think we can leave out the nitrogen and use potash and phosphoric acid in above proportions. In order to obtain these materials "common sense" would teach us to use our own waste matters, that is, bone meal and wood ashes, which at present we ship across to the United States to improve the quality of their fruit. In bone meal the steamed will be found more economical than the raw, being less in price and having a higher percentage of phosphoric acid, though lower in nitrogen, which is no detriment in a properly managed orchard.

For the potash we should use the ashes produced at the farm, and in addition thereto the commercial potash salts, particularly sulphate and muriate of potash, which are very high grade, containing 50 per cent. of pure potash, while ashes contain only 5 per cent. on an average. Weight for weight, the potash salts mentioned are worth five times the value of ashes, and as a commercial article the former are usually a more economical source of potash than the ashes,