stables; but unless land is vory open and hable to dry out very readily, why not allow the rotting process of the manure to go on in the soil and thus save every particle of fertility and al-o improve the mechanical con-dition of the land? We intend publishing an article on the care and application of farmyard manure, in an early issue, which will answer your question more fully.

Farmer's Ad.

SEED POTATOES.

The studies of The American Agra culturist's potato tests give some inter-esting points. While the reports from farmers who raised big yields show wide difference in the quantity of seed used, upon one leading point there is great unanimity among all growers—viz: The careful selection of the potatoes used for seed. In every instance thir, smooth, handsome, well shaped potatoes were chosen. Not always were they large, but they were always of uniform size and weighing usually from six to eight ounces each. In one case 26 bushels used in seeding an acro were selected from a choice lot of 50 bushels of fuir, merchantable potatoes. The range in the amount of seed used was very great-from 8 to 66 bushels, the ave rage being 211 bushels. The amount of seed used in preparing for the three largest yields reported were, respec tively, 26, 16 and 131 bushels. A curious thing about this seeding is that in the first instance the crop was 974 bushels, in the second 847 and in the last 738 bushels. Another curious fact is shown by a further study of the returns. In New York a planting of 40 bushels of seed yielded a crop of 441 bushels, and in Maine a seeding of but 10 bushels gave a yield of 537 bushels. In this last instance the potatoes were all cut to one eye, and the seed ends and stem ends discarded. Everything points to the fact that we want high bred potatoes for seed, as much as we want thoroughbred and mals for breeding, and the same care in selection should obtain in the one case as in the other. By all means reject undersized, imperfect, badly shaped potatoes for seed, says The American Agriculturist.

LIME

BY SIR J B. LAWES, BART., LL. D., F. R. S.

[The following is taken from the columns of the North British Agriculturist.]

The report of the directors of the Scotush Chamber of Agriculture contains so , e very interesting tables respecting the exhaustion of lime.

The directors have brought together in one page the opinions, and experience of the great body of the farmers of Scotland; and, according to the evidence thus supplied, the shortest period of time during which a full application of lime, is said to last, is seven years, while thirty years and over is stated to be the longest period.

When we consider that the influence of lime, upon a soil which is naturally deficient in this substance, is due to several distinct causes; and further, that the after treatment of the land which has received the lime differe much in different cases, we have no difficulty in understanding that there inmed their must be considerable variations in the thing.-Kp.

poriods of time during which the bonoficial offects of lime will be appa ront.

Two of the crops which are grown at Rothamsted in our ordinary rotation-roots and olover-contain large quantities of lime in their ash, and when jotash is not abundant in the soil they possess the property of uti-lising this lime in its place.

The ash of leguminous plants grow-ing in an ordinary pasture which had been well supplied with potash, contained 32 per cent, of potash and 22 per cent, of lime; but on pasture where potash was not supplied, the ash contained 32 por cont. of lime and 14 per cent. of pot 17h Lime, therefore, economises the use of po tash.

The first application of lime to moor land, or to pastures which are deficient in lime, is often followed by a growth of white clover so abundant as to have led some to the conclusion that the plant was spontaneously generated in the soil | It may be observed, however, that it is only plants with creeping roots which can so rapidly cover the ground; a similar instance in the case of arable land may frequently be observed in the equally rapid covering of the soil by couch grass; this being a graminaceous plant can find in all soils an abundant supply of its own proper food-silica ; but lime in many soils is by no means abundant, and, if the supply is suffi-cient, a liberal dressing is essential, not merely for the purpose of furnishing the lime which the plant takes up, but also to enable the roots to be in constant contact with that substance.

I may observe that although the amount of lime dissolved, and re-moved in drainage waters, is considerable, still, the necessity of repeating the application after a few years appears to be rather due to a descent of the lime to a lower level in the soil, where it is less accessible to the roots of the plants.

Lime also acts as the medium by which nitrification takes place; and the almost ontire absence of nitrates in the water passing through the peat soils in Scotland--which abound in nitrogen--must be mainly due to the BEAN GROWING IN KENT Co., Ont. absence of lime.

A reference to the returns in the table shows that the effect of lime is most durable upon pastures that are grazed ! that its effects are very good upon virgin soil; that it lasts longer upon good, than upon bad land. and upon clays and heavy loams, than upon light land.

The amount of soil nitrogen which is nitrified each year must depend somewhat upon the amount that the soil contains; but where each appli-cation of lime is attended with less benefit than the preceeding one, we may feed tolerably sure that the res-sources of the soil have been too largely drawn upon, and that the export of fertility has been too great. (1)

Lime therefore acts in a double capacity; it furnishes an important ingradient in the food of roots and leguminous plants; and in addition, it furnishes the key by which the stores of organic nitrogen in the soil are unlocked, and rendered available as the food of plants. It is in this latter capacity that its functions are more liable to be abused.

As lime does not farnish any of the more costly ingredient which plants require to form their structure and seed it is quite evident that these must be derived from the soil: this

(1; The Glamorganshire (S. Wales) farmers limed their land till it refused to grow any-

being the case, if the views of these who hold that agriculture should be carried on without any reduction of the fertility of the soil are correct, it is evident that an application of lime should be accompanied by an applica-tion of all those ingredients which are carried away in the crops, or by feed ing with stock. My own opinion is that soils are

generally compotent to yield a cor-tain portion of their fortility without injury, and that practical experience of the particular district will be the best guide for deciding the amount of fertility that may be thus removed.

FARMERS' CENTRAL SYNDICATE OF CANADA,

30 St. James St., Montreal.

Honorary President : His Grace, Archbishop C. E. Fabre, Bishop of Montreal.

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The Farmers' Central Syndicate is in a position to supply the farmers with all that is required for their farms : machinery of all kinds, ensilage cutters, mowers, reapers, rakes, dairy supplies, cheese factory outfits, flax breakers and scoutchers, binder twine, bearded wire, thoroughbred animals of all descriptions, fertilizers, &o., &o. All the above mentioned goods are first quality, and highly recommended by the most competent men. The prices are exceedingly low, as can be proved to all those making inquiries at our office or by mail; the purchaser is always sure to gain from 20 to 40 % in buying through our intermediate; the annual subscription is thereby soon refunded. We call the special attention of those

who intend using fortilizers to the fact that we have obtained lately large discounts from the Nichols Chemical Co, of Capelton, thus enabling us to quote low figures. Write for inform-ation before purchasing elsewhere; it will pay you.

BY W. A. M'G

Since the downfall of prices in wheat, bean growing has been pushed with vigor, until at the present time there is hardly a farmer in the county but raises between ten and twenty acres each ; and numbers grow from fifty to seventy-five acres. And yet, owing to the fact that there is but a small tract of country adapted to the growth of this orop, the market re-mains firm and the demand strong. The average price paid to growers in this locality for the last six years has been about \$1.25 per bushel. Quite an inducement to grow more beans and less wheat, is it not?

Although some risk is incurred of losing the crop by frost, by having a well enriched soil, with early planting and proper cultivation, the crop can be rushed on to early maturity, and this danger reduced to a minimum. Sod is always preferable for beans, although several farmers in beans, although several farmers in this vicinity follow another plan, which is to plough up their ost-stubble immediately after harvest and seed it to rye, which is pastured dur-ing the fall. It is ploughed under the following spring at least a week or ten days before planting time. This beth enriches (1) and in rotting warms both enriches (1) and, in rotting, warms

(1) Mighty little "riches" in green rye.

the soil, thus giving them a grand start. When a sod field is used it should be ploughed late in the fall, or in early spring. Fall ploughing is preferable for the reason that it makes a splondid place to haul manure upon during the winter, insteal of allowing it to waste in the barnyard. Cultivation can then commence as soon as spring opons.

If the manure is long, the first working should be done with an implement that will turn it under (with the double object of rotting the manure and sprouting any weed seed it may contain) and still not tear up any sod. For this work we have found the disk harrow an excellent implement. To get the soil in the best possible condition, it should be worked over every week or ten days, always leaving it rolled after each working to hold in the moisture.

The planting-time varies from about 20th of May to second week in June, according to the season. They are drilled in at the rate of three peeks (1) per acro, with an ordinary grain drill or regular bean plantor. The latter has the advantage of the former, in that it drops the beans in hills and also ridges the earth over the row, thus making it easier hosing them, and shedding heavy rains which settle and form a crust in the drill's mark. The principal varieties grown are the Medium and the Pea. The latter is of late introduction, but has proved itself more than a peer to Medium. It has the advantage of ripen-ing from one week to ten days earlier, stands the drought and yields better, and commands from five to ten cents per bushel more in the market.

Cultivation should continue as soon as the beans are large enough, and if the field has been well-worked before planting, and good cultivation is given afterwards, very little hoeing will be required : bnt what is needed should not be slighted, as there is nothing worse to harvest than a weedy field of beans. Harvesting is one of the most important parts of bean raising; for unless they are pulled at the right stage of ripening, and handled with care while turning, loading, etc., there is great loss from shelling.

The pulling is done with a beanharvester or plow, or by hand : the lattor plan is resorted to where but very small acreage is planted. The proper time to pull them, when done with horse machinery, is before they have all ripened, and the field presents a rather green appearance. Of course where pulled by hand they may be allowed to ripen more fully, as there is less danger of shelling them. Very fow will be shelled in pulling them, if done while they are damp. For this reason, mornings and evenings are best suited for cutting. Before mowing away, they should be thoroughly dried,—if not, they will heat and mould. An experienced person can tell when they are fit to haul, by the "rattle" of them—a sound made by the dry pods when handled. If the crop has been properly cultivated, it will take very little working to put the land in fine order for wheat, which generally succeeds beans (when the price is right.)

By following the plan outlined above, we raise from 25 to 35 bushels of choice beans per acro, and this is usually followed by a good crop of wheat. (2)

It requires grand land, with heavy

(1) 6 to 8, and even 10 pecks are none too though !-- Eo. 30.03