

FARM and GARDEN.

THE BEAN AS A FIELD CROP.

While every farmer plants a few beans in his garden, but few grow enough to furnish more than is wanted for home use, the bean is a product that always finds a ready market at good prices. Those who have high land, with loomy soil can easily raise an acre or two of field beans that would bring profitable returns, providing care be taken in the selection of seed. It is not safe to go into the open market and buy seed, for if they come from the South they will fail to produce a crop that will ripen even, and are more likely to run to vines. Eastern beans are better, but he who raises field beans should never trust to the open market for seed, but should buy what he has every assurance is good. The best way is to raise them, being careful to start with the best that can be found, and to make every effort to improve them. Selections should be made from those plants that produce the largest quantities of good beans that ripen very nearly at the same time.

It is a great objection to a variety if it continues to blossom until the frost comes; it being impossible, without great labor, to separate the green from the ripe beans. It very much injures the quality of beans to have green ones among them, and reduces their market value, but a variety that blooms full, covering all parts of the plant nearly at the same time, and then stops sending out any more buds, will mature its seeds all at one time, which is what is wanted for a market bean. When they ripen in this way they can be gathered earlier and are in a condition to be put on the market at once.

The first new beans in the market, if good, will as a rule bring in an extra price. It is very easy to get a good variety by selection, and when once obtained, very easy to keep. The medium sized pea bean is one of the most profitable varieties for most markets. It produces more to the acre than the small size, and is, as a rule, more uniform in size. It always commands a ready sale, and if put on the market early in the autumn, as it can be, it will command twenty-five to fifty cents a bushel more than the beans that do not ripen until the cold weather sets in.

SAVE THE LIQUID MANURE.

One of our contributors a short time ago discussed pretty fully the wastes in the manure yard, and among others spoke of the wastes of liquid manure, or as he termed it, the manure juices. This subject is receiving a very great deal of attention among scientific agriculturists, and numerous are the tests and experiments which are being made.

According to the experiments of the best German chemists, the liquid manure from the horse amounts to one and a half tons per year, which contains 1 nitrogen and potash worth \$12.75. The cow furnishes four tons, containing \$14.00 worth of the same elements. These figures show the importance of saving all the liquid manure possible, even if only one half of the whole quantity be voided at the stables. If two horses and ten cows are kept, the liquid manure they would make, provided it could all be saved, would be worth \$165.50 or enough to buy about four tons of good phosphate. If but one-half of it is voided in the barn, and the half of that is wasted for the lack of absorbents, or washed away

by rains, it would require a ton of phosphate to replace the loss.

If it will pay to build a silo for a herd of ten cows, will it not pay to build a cistern to hold the liquid manure of the same number of animals? If dry earth or peat be used as absorbents it would require at least its own weight in the absorbent. Would it not be easier to pump out and spread forty tons of liquid, than to draw in forty tons of dry earth and draw out eighty tons thus saturated with moisture? These are practical questions for the consideration of the farmers, and worthy of their study.

If such a cistern were built, would it not pay to allow soapuds and all waste water from the house to run into it, thus saving whatever of fertilizing value may be in them, and at the same time disposing of a material which is too often a nuisance about the house, and which, in a few years, may so saturate the ground near where the sink pipes discharge as to drain back into the well and pollute the water supply of the house? Such a dilution of the liquid from the stables would only better fit it for application to the soil.

OILING WAGON WHEELS.

A well-made wheel will endure constant wear from ten to twenty-five years, if care is taken to use the right kind and proper amount of grease, but if this matter is not attended to it will be used up in five or six years. Lard should never be used on a wagon, for it will penetrate the hub and work its way out around the tenons of the spokes and wheel. Tallow is the best lubricator for wooden trees and castor oil for iron hubs, but many of the present axle greases are also excellent; and have the merit of being cheaper and easier to handle. Just grease enough should be applied to the spindle of a wagon to give it a thin coating. This is better than more, for the surplus put on will work out at the ends, and be forced by the shoulder bands and nut washer into the hub around the outside of the boxes. To oil an iron axle tree, first wipe the spindle clean with a piece of cloth wet with spirits of turpentine, and then apply a few drops of castor oil near the shoulder and end. One teaspoonful is sufficient for the whole.

BARNYARD MANURE.

The question of barnyard manure is every day growing a more important one. As the natural fertility of the soil lessens from constant cropping, we are compelled to look about for means of restoration, and hence there never was a time when the contents of the barnyard received more careful attention than now. And justly too; for if we would be successful farmers we must understand the chemistry and economy of manures in relation to their action on the soils. From the lengthy report of Dr. Voelker, a most eminent and reliable authority, we glean the facts given below:

1. The soluble parts of manure are much the most valuable, therefore it is important to save the urine, and to keep the manure protected from the rain. Manure thrown out and exposed to the rain becomes just as worthless as wood ashes thus exposed.

2. Farm-yard manure, in its fresh state, contains soluble phosphates of lime, insoluble nitrogen, and but a small proportion of free ammonia.

3. The urine of horses, cows and hogs, does not contain any considerable amount

of phosphate of lime, but this is largely contained in the drainage of dung heap, which are more valuable than urine.

4. The most effectual manner of preventing loss in fertilizing matter, when not composted, is to cast the manure directly on the field, whenever circumstances will permit. On all soils with a moderate proportion of clay, there is no waste if the manure is not ploughed in at once. Indeed, it is maintained by some that it is the best to permit manure to lie on the surface and allow the rain to wash it into the soil. In the case of dry soils it may be evenly spread, and allowed to remain for months without appreciable loss; but, on light, sandy soils, it is best to manure with well fermented dung shortly before the crop is put in.

Well rotted dung contains a very much larger proportion of soluble organic and saline mineral matters, than fresh dung. It is also richer in nitrogen, and, weight for weight is more valuable.

During fermentation dung gives off organic matter in a gaseous form; but if properly handled there is no great loss of nitrogen. Organic acids are always formed and gypsum is developed. These fix, or hold the ammonia as fast as it is generated. While fermenting, the phosphate of lime which it contains is more soluble than when the manure is fresh. Ammonia is given off in the interior of the fermenting heap, but is arrested by the organic acids, and the gypsum in the colder external layers. Turning heaps over, therefore, occasions loss, though some think otherwise.

LIVE-FOREVER.

Most of our gardens have a bunch of live-forever and there it is cultivated for its beauty and the curiosity which is attached to it by its great tenacity to life. In some parts of the United States it is becoming a great pest, and is reported by the *American Agriculturist* to be on the increase. It ought to be attended to by our Canadian farmers that it does not become a nuisance in their gardens and fields. Its character certainly would make it a formidable weed since it can find nourishment in a crack in a board or on the roof, only a little less readily than in a good rich soil. We can remember when we were boys at home putting stalks of live-forever in places of the kind and finding them afterwards growing quite thriftily. Better drive the live-forever out now and not let it get established in the gardens and fields.

THE TURNIP FLY.

The wavy-striped Flea-beetle, or "Turnip Fly," (*Halica striolata*), is a great pest to young turnips when first breaking through the soil. If the young seedlings can be protected at this time until a few leaves form, they usually need no further care. One of the best preventatives is to have the soil rich and well prepared, that the crop may push forward rapidly. Some turnip growers have found it profitable to employ boys with bags attached to curved forked sticks, which are run astride the rows of young plants. The beetles, when thus disturbed, jump into the bag and are afterwards destroyed. A common application is equal parts of wood ashes and land plaster, entirely covering the young turnip leaves. Finely powdered air-slaked lime may be dusted on with a bottle-shaped tin dish, having holes in the bottom, and a wooden handle in the top.

CABBAGES.

It is not too late now to plant cabbages for fall or winter eating. It is a crop that will pay. If it cannot be sold it can be fed to the cattle, the sheep or the hogs.

Select as large varieties as you can, and plant as early as convenient. Plant in rows three feet apart; this will admit the use of a hoe or a cultivator.

It is not a great deal of trouble to plant an acre of cabbage if it is gone about properly. Have the land marked as you would for corn, and have a plant dropped in every hill and planted there.

THINNING FRUITS.

Almost every experienced fruit-grower will concede the expediency of thinning most kinds of fruits, will admit that it makes larger, fairer, better, more salable fruit, that it even increases the bulk of fruit that a tree will yield, and yet, we doubt whether one practical fruit grower in a hundred practices it thoroughly. In the following, by Mr. J. B. Rogers, of Milburn, N. J., contributed to the *American Gardener*, we have the arguments in favor of the practice well stated:

Man, as a general rule, is avaricious. In the pursuit of gain he overtaxes his physical powers, and early death is the result. He plants a tree or bush, excites by stimulating manures its fruiting capacity to the highest degree, and in his eagerness for abundant crops causes weakness and an early death.

Nature perpetuates all fruit by the production of seeds. The maturing of these makes the heaviest drain on the vital energies of the fruit. Thinning fruits lessens the number of fruit to be ripened by a tree, and therefore increases its vigor. Judicious thinning improves the quality, quantity and general appearance.

Peaches should not be allowed to be nearer each other on a tree than four inches, and will then, as a rule, produce more in quantity than when nearer. Grapes, left to themselves, set many bunches of small size, having many green berries, ripening unevenly, remove the greater part, and you will be rewarded. The tendency of the Bartlett Pear is to over-production. Thin severely while the fruit is quite small. Repeat the same operation when the pear has made about half of its rapid growth toward maturity. Ripen these with care, and the result will be Bartletts in perfection, and a week or ten days earlier than those picked at the usual time. The lack in size is more than compensated for in quality. Plums, if not attacked by the curculio, must be thinned by hand. Thinning apples acts beneficially, and has a tendency to promote an annual crop of fruit. Pick part of the crop of currants from each bush while green, for use, and mark the result. Gooseberries being used generally before ripe, are not as exhausting upon the bushes as other small fruits.

Thinning of fruits is also a great protection against disease of the tree and fruit. It increases the vigor and health of the plant or tree, adding size and color to the fruit, imparting increased flavor, thereby gratifying the palate and pleasing the eye.

The demand for strictly prime fruit is much greater than the supply, and those who produce the best are always sure of obtaining the best prices.

Lord Coleridge said that John Bright built himself up on Milton. If Mr. Bright were an American and an Arkansaw man, he would have built himself up on Bacon.