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neric**ans game** scarce timber and chunches, h the coming Canada, and became mone long streams IWAY. Do the

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hills, broken it San Fran most entirely ere supposed s of supporthem mines ai and sand by up from the ld also cast reighborhood began plant about one

13 miles. three years. aillion young r three cents four species

t apart : 95 ish, and new til there is a ees, of great

of this land of California. and on these cut through s have been as been made dollars were ber om tille

these these many heine of four on h was paid d draw time

thirty wears per aune au 31 miles, lass and avenues

hardly wonth g the forest - S01i rom the lung eon at night. the base of

AUGUST 11, 1910

growth.

plot.

conie.

the universe

particular.

the distance of a few feet.

in trees, showed his faith by setting out a plot

in the eastern part of the State, near the then

Village of Plainview, and about twenty miles from

the Mississippi River, with such rapid-growing

trees as had been recommended for prairie

\$20 per acre, or \$600 in all; the value of the land

about the same at that time, and the annual

value of the investment, at 8 per cent. simple in-

terest, about \$96 per annum. The cost for care,

after planting, was practically nothing, and what

little there was, was more than met by the value

and live in comfort and comparative luxury upon

the sole proceeds of timber sold annually in small

lots from this 30-acre plot, leaving, at the same

time, all the smaller growth for the days to

come may live and thrive on the fruits of one

from reiorestation ; who can estimate its value

men are made better by seeing things grow, and

by holding converse with things that, while they

dig deep down into mother earth for her treasures

point with manifold fngers up toward the God of

Commercial Fertilizers.

pressed by enterprising firms and agents to pur

chase commercial fertilizers. It will be well for

the farmer, under such circumstances, to do some

careful investigating, some careful experimenting,

and to do a good deal of hard thinking, before

soil what it already possesses in abundance, is a

waste that eats its way into the profits. On the

other hand, to sow grain in a field that is lack-

ing in an essential for plant growth, is to pave the way towards certain loss. Some fields yield

an abundance of straw, but the grain tests light.

Here we have a clear case of lack of available

phosphoric acid. A proper addition of this in-

gredient is almost sure to be attended with profit.

Soggy potatoes indicate a need of sulphate of potash, or of wood ashes. Further, many a field

falls behind, not because its soil is not rich in the

proper soil constituents, but because it lacks under-

draining and sufficient cultivation. The farmer

must study his farm in detail before he can afford

to make costly experiments in this or in any other

good deal of time and considerable experience be-

fore results become instructive. Sometimes the

those alleged. The plot experimented with is

usuall, well prepared before sowing, and par-

ticularly well cuitivated during the season. Then,

the fertility of a field varies greatly, even within

Indeed, the farmer who is eager to improve the

alleged results are due to causes quite remote from

Again, making such an experiment requires a

For one thing, the farmer must be careful to

To add to the

investing extensively in any such products.

give the soil only what it needs.

Just now the farmers of Old Ontario are being

The writer happens to be one who believes that

man's foresight in the days not so long ago.

to climate, scenery, aye, to character itself ?

These are the monetary advantages

Within 35 years of the date of planting this

the owner was able to retire to the town

And so, with proper care, generations to

of thinnings after a few years of growth.

The cest of afforesting this tract was about

from the East, one far-sighted man, who had been such a catastrophe, by giving the young plants a accustomed to the beauties and benefits of forest start that enables them to be vigonous when the growth, and who believed that there was money drouth and other summer enemies make their ap-

pearance York Co., Ont.

New Concrete Silo.

new concrete silo of an interesting 1 has recently been erected in Wiscon-The silo has a steel framework of slotted steel studding and metal lath, plastered on both sides with cement mortar, making hollow walls of concrete. No wooden forms were used. The steel frame reinforcement consists of galvanized steel studding or channels $2\frac{1}{2}$ inches wide, spaced 12 inches apart. These study are made from steel hoops, and have an interlocking tongue cut out of the center of each upright piece of studding. This tongue is thrown out at right angles and attached to the next stud, forming a horizontal line of braces at intervals of every 17 inches in the height of the silo. Expanded metal lath is attached to the stude on both sides of the wall. A waterproofing compound was used on the cement plaster.

The steel framework was put up complete in three days; an additional day was required to put on the roof. The plastering was done in four days, and the silo was filled on the fifth day after its completion. The walls have a continuous hollow-wall air space, and the steel is galvanized to prevent corrosion; the cost is said to be only a little above the cost of a stave silo.

The ventilating facilities are operated from the ground on the outside of the silo by an ingenious device, and the structure is provided with the usual doors and entrance on the side and roof. The makers claim that the silo is quite indestructible, free from the danger of fire, and will always maintain a uniform temperature.

Usefulness of Birds.

The United States Department of Agriculture has just finished an extensive and complete study of the seventy varieties of birds found in California, to learn which ones were harmful and which beneficial. Out of them all only four species were found to be of doubtful utility when a careful study of the life habits and of the stomach contents was made. The more the food habits of birds are studied the more evident is the fact that the damage to agricultural products by birds is small compared with the benefits. In Canada we might make the one exception of the English sparrow, whose harmfulness is very evident at this season. Aside from this one species few birds are always and everywhere so destructive that their extermination can be urged on sound economic principles; some, like the swallows, swifts, wrens and chickadees are so strictly insectivorous that they are exceedingly beneficial, while others may injure crops at certain times of the year, but the loss is exceedingly small, and if by its insectivorous habits the bird prevents much greater destruction than it inflicts, the farmer should be glad to bear the lesser loss

Notes from Essex.

Pigpen Partitions.

Editor The Farmer's Advocate

In your issue of July 28th, ult., I find an inquiry re partitions for pigpens. I would prefer the wire : I consider it better in many ways. If you have a wide building with a goodly number of pens and light only from sides, by using wire you will have light in all the pens; with plank several of the pens would be dark. I think the objection your enquirer has to the wire becoming loose, the reason is the pigs get their snouts under and if posts are far apart they certainly will loosen it. This trouble can be guarded against in the following way : If floor is cement, put iron rods three-quarters of an inch thick and twenty inches long, having a head on one end and the other end having a screw with nut; put an iron plate or a cedar block on the end with the screw. Place a row of these about three feet apart, for big pigs, in line where you intend to have your partitions; place them so that they will be 11 inches higher than the floor, when finished, or room between the head of rod and floor to fasten the wire partitions to with a piece of strong wire : if for young pigs, four to six feet will be close The end of the enough to put the rods apart. rod, with iron plate or cedar block, should be so put in floor on a firm place the required height, then place your stone on iron plate or cedar block, then finish with cement in the usual way. Now if a plank floor, the wire partition can be fastened to the floor with an iron plate screwed to the floor, about the same distance apart as the rods. Now, if the floor is to be earth, put your wire partition eighteen to twenty-four inches below With regard to old boars, they sometimes will get hooked by the tusk to the wire partition ; saw off the tusks in the following manner: Get a good strong rope, with a noose on one end; put the noose on the upper jaw of the boar, draw the rope over a beam about six feet high; draw the boar close to the beam, almost lift him off his front feet; get a fine saw and saw the tusks off as close as you can to the jaw. W. McA. Carleton Co., Ont.

POULTRY.

Poultry Manure.

As is well known, when the poultry droppings accumulate under the roosts, and when they are left in barrels, there is a strong odor of ammonia noticeable. The development of such an odor is a sure sign that gaseous ammonia is escaping into the air, to be lost for the present. How to prevent such a loss is to prevent the development of the odor. Several chemicals of more or less fertilizing value in themselves may be added to the droppings from time to time, with good ei fect, both in stopping waste and in making the atmosphere of the henhouse more wholesome.

The best materials for this purpose are gypsum or land plaster, acid phosphate, and kainit, a theap potash salt. Each of these chemicals has the power of forming new compounds with the ammonia as fast as it is set free from the original combination. Wood ashes and slaked lime should never be used, because they cannot combine with ammonia, while they do force it out of its com-

THE FARMER'S ADVOCATE.

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es are **fho**m ble to **cur** o cases that f Tully Mounnter of 1877 t cleared one iber cuttime plings small cleared was clearing fim

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to cours, its es of timber neres in the er reserving turu om am ALBRIDACIO is had heen rs from time

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fertility of his land will do well to lay the stress of his energies upon the feeding of cattle on his Buying manure often means buying own larm. weeds-a thing no farmer can afford to do. buying grain for feed, grinding and feeding reduce the weed menace to a minimum, while the growing of the necessary clover and roots is the best sind of test living and cultivation.

Not that the writer would discourage the use of artificial fertilizer, by any means. He has used it hunseli, and he has known his neighbors to use it, with good results. His one wish, in writing this, is to warn others against supposing that commercial fertilizers may be used indiscriminately, and at the same time with profit, or that they are in any way an effective substitute for good seed or for cultivation. If used intelligently, in view of the soil's needs, and with an or to chectus, a special result, as stiffening the straw or accreasing the weight of the grain-berry. or for developing branch or for giving mealines to positoes or colar to iruit, commercial ferti lizers see a caluable function. Clearly then, the farmer who would obtain desired results, must understand the use of farm chemicals, as a skilled physician understands the use of drugs or of STHECTAL FORM

that be thought that good commercial in the same class as pure tonics or They are far more than that, as they be s abused to supply what the soil sol intelligently, they are a great help dant with what stockmen describe ed ration - These are the days when are and dear Intensive farming is it for a farmer to miss a root crop evial fertilizers help to prevent just the deduction plain?

Harvest is almost over in Essex. The wheat helds are again bare; threshing is now the order of the day. The yield is slightly above the average; i.e., from 25 to 45 bushels per acre; the quality is excellent. Barley is scarcely up to expectations. Oats are an extra good crop, both as to quantity and quality. The sample is much superior to last year. They matured rapidly, and ripened from seven to ten days earlier than they have for many years. Many farmers have buished cutting, and in several instances fields have been stored in the barn before the close of July. Should weather continue fine, harvest will be over before the end of second week in August Carloads of fruit and vegetables are being shipped daily from different points in Southern Essex as giving promise of an abundant harvest A E

In a trip through Elgin and South Oxford Counties, two weeks ago, along the Michigan Central, count was kept for some miles of the number of barns with and wethout silos. Fifteen with, and sixteen without, was the result. It was conspicuously noticeable that, with a very few exceptions, the silos accompanied the best barns, and stood on the thriftiest, best-tilled farms. Most of the barns without silos were small, old, and more or less dilapidated, while indifferent crops, durty fields and wasting manure piles told the rest of the tale. Though the contrast is not always so marked, this story can be duplicated in almost means serious inconvenience and any section where silos are to be found. Is not

pounds and take its place

Plaster is apt to produce a dry, lumpy mixture when used in large enough quantities to arrest the ammonia, while kainit and acid phosphate produce the opposite effect of a moist, sticky mass.

In Bulletin 98 of the Maine Experiment Station is described an experiment in which sawdust was used, in addition to the chemicals. By this addition of an absorbent, the kainit and acid phosphate could then be used with excellent results.

Using their results as a basis for calculation, the weekly droppings of a flock of 25 hens, when scraped from the roosting platforms, should be mixed with about 8 pounds of kainit or acid phosphate and a half peck of sawdust. If one desires a balanced fertilizer for corn and other hoed crops, a mixture of equal parts of kainit and acid phosphate could be used instead of either alone.

Good dry meadow muck, or peat, would be equally as good as sawdust, if not better, to use as an absorbent.

In the experiment mentioned, more than half of the ammonia was lost in hen manure without chemicals, when compared with that which had been mixed with them.

Fresh poultry manure, at the present values of fertilizers, would be worth 60 cents per hundred Figures from different experiment stations would give the product of 25 hens for the winter season of six months at 375 pounds from the roost droppings only.

Poultry manure is especially adapted as a topdressing for grass, because of its high content of nitrogen in the form of animonia compounds, which are nearly as quick in their effect as nitrate of soda. A ton of manure preserved with sawdust and chemicals would be sufficient for an acre, when compared with a chemical formula for top-dressing.

On the same basis of comparison 100 fowls running at large on an acre, should in a summer