

Farm and Home.

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The circulation of Farm and Home for this issue is
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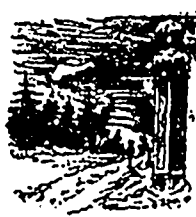
A WORD WITH OUR READERS.

By this time our readers have had ample time to read and reread our unsurpassed premium number—our last issue. Farm and Home is now more than ever, the paper for the great masses of the American and Canadian farmers. The more it is made so by our friends the better paper we can afford to print. The file for 1899 will contain over 550 pages of well prepared, reasonable farm and home matter and at a price absolutely unequaled by any other publication. These are facts well known to all of our readers. Now we want each reader's assistance in pushing up each and every issue to the million mark. Write to us for some specimen copies and visit all your neighbors and friends. Remember that F & H is but 35¢ in clubs of two or more and the club raiser either gets a nice commission or valuable premium. Don't mislay our elegant premium number, but keep it for reference. Send us every new subscription you can get and pick your own premiums from the Oct 15 issue.

There needs to be instituted a new order of teaching agriculture in this country, for most men will not act any further than they can see.—[Ex-Gov Board, Wis.]

All Around the Farm.

FERTILIZERS AND THEIR USE.



IN the granite hills of New England, upon many of the original formations of N. Y., N. J., Pa. and Ohio, in the alluvial river bottoms of all of these states, the soils undoubtedly contain a sufficiency of nitrogen, potash and phosphoric acid to produce maximum crops for a long series of years, provided good farming is practiced or that some one, or at the most two, of these elements are added, while others naturally poor, or which do not possess the necessary physical or chemical characteristics in a high degree, require that all shall be added. The question, Will it pay to use fertilizers to assist in their improvement, can be safely answered only when you know the man that asks the question, for aside from the possession of definite knowledge concerning what fertilizers are, as well as a knowledge of the possible needs of the soil in respect to them, "The Man with the Hoe" is the controlling factor.

Some purchase materials which oftentimes may be of no practical use, or if of possible service if properly used, the use has been such as to render the practice unprofitable in the long run. The general practice in the buying of fertilizers is for the farmer to go to his nearest dealer and purchase what he regards as the cheapest without sufficient regard to the kind and proportion of the constituents contained. He does not inquire whether it is nitrogenous, phosphatic or potassic in its nature—his main idea is to make his money go as far as it will on the tonnage basis, fortunately, there are now many exceptions to this rule.

The application is also too often unsystematic and illogical, and no fertilization can be wholly profitable that is not systematic that is not done by a person who knows what he buys, and who has some definite idea at least of the needs of his soil, and the character of the exhaustion resulting from the kind of cropping that is practiced. By his present method, he may be constantly adding to that which his soil already possesses in abundance, and thus receives no adequate return in increased crops.

The average brand contains only about 300 lbs of actual fertilizing constituents, due to the fact that the demands are for cheap ton prices, though this average is misleading in one particular, inasmuch as it really represents a better fertilizer than is actually purchased. Fertilizer manufacturers, as a rule, admit that it is quite as easy to make brands that will on the average contain as high as 450 lbs of fertilizing constituents, or 50 per cent more than is contained in the average manufactured brand, and that the charges for handling, shipping and bagging would be practically identical, whether the ton contained 300 or 450 lbs. If the higher average maintained the purchaser would get in two tons what he now gets in three, besides having a surer guarantee of the value of the constituents than if the lower grade materials were used.

Many purchase without regard to the character of soil, or its previous treatment, two conditions which should guide, since soils of the same natural character and located equally well will not always show the same results from the application of fertilizer, because in the one case the cropping has been such as to permit of the rapid exhaustion of one, rather than the three, specific elements, while in the other, the cropping may have been quite as severe, but has been helpful because judicious rotations have been used and improved methods practiced.

In the continuous cropping of wheat there would be a much more rapid exhaustion of phosphoric acid than of potash, and if this is continued for a long time, an application of the phosphates only may result in quite as large an increase in crop as if phosphoric acid and potash are both added, because the potash may not have been exhausted; the addition of it would simply add to an abundant supply already present.

On the other hand, if the cropping

has been timothy hay, the removal of the potash would have been greatly in excess of the phosphoric acid, and consequently a fertilization with a greater proportion of potash, or even this element alone, of the minerals, may result in quite as large returns as if the fertilization has consisted of both phosphoric acid and potash. If the land has been cropped continuously with tobacco, cotton, potatoes, or other crops, there is likely to be a much larger removal proportionately of some one element, rather than even amounts of all. On the other hand, the cropping may have been such as to be fully as exhaustive in the sense that the

WEIGHTS OF FERTILIZING CONSTITUENTS IN PROTECTED AND EXPOSED MANURES.

	Fresh	3 mos	6 mos	9 mos	12 mos
	a b	a b	a b	a b	a b
Weight of manure,	8,000 8,000	2,980 3,903	2,308 4,124	2,224 4,189	2,185 3,838
Organic matter,	1,938 1,938	\$80 791	\$83 652	760 648	770 607
Total nitrogen,	48 48	40 32	39 33	37 29	37 31
Total phosphoric acid,	25 25	25 25	26 22	25 21	24 21
Available phosphoric acid,	15 15	20 15	19 15	21 17	19 16
Total potash,	62 62	65 48	59 44	60 41	60 40
Available potash,	54 54	62 45	52 42	56 38	55 35

total quantity of constituents removed is quite as great, though since they are removed in more uniform proportions, the period of profitable cropping is extended, and the fertility needed includes all the essential elements, rather than one or two.

It is not alone a question of yield that must be taken into consideration, or the rate of increase that may be obtained from a given number of pounds of added fertility, for the increase in yield may be in all cases quite as great as it is possible to obtain even under the best conditions, and yet the use of it results in a financial loss. To be profitable, fertilizers must be applied to crops, the possible increase in which will bring more than the cost of materials used. Those crops which are generally grown include the cereal grains, hay, etc., which are of a relatively low commercial or market value, but which are highly exhaustive in reference to the fertility elements, while in the case of such crops as fruits or vegetables, the amount of constituents removed is infinitesimal, they are of a low fertility value, and possess a relatively high commercial value. The possible income from a definite expenditure is much less in the former than in the latter.

The use of fertilizers for staple farm crops will not be found to be highly profitable if the profit is to be wholly measured by the returns from each crop to which the fertilizer is applied. Profit is measured by an intelligent and systematic use, which in connection with good practice in other directions will result in a genuine increase in productivity. Too much fertilizing is done by the "hit or miss" method on the principle that if a hit is made there is a relatively large profit, if a miss, the loss is small. It is a gamble from start to finish, and like gambling in other lines, the final outcome shows the bank to be the winner. On the other hand, by the use of intelligence, judgment and foresight, these three great gains may be made.—[Director E. B. Voorhees, N. J. Exp Sta, to Nat'l Farmers' Congress.]

Connecticut's Abandoned Farms are more a myth than a reality. In fact, the new catalog just issued is nothing more or less than a small real estate bureau gotten up and paid for liberally by the state to help out a few savings banks and what appear to be real estate agents, and farmers incidentally. After writing to town officials, agricultural societies, farmers' clubs, granges and private individuals, only 165 "abandoned" farms could be found in the state. These 165 "farms" include eight building lots 50 by 150 feet within one mile of railroad station and largest city in one county, and a trolley road runs past the lots; these 50 by 150 ft "farms" can be obtained at the moderate price of \$150 each. A few other of Connecticut's 165 "abandoned farms" include 25 in one town near by the big city of Norwalk, and with near or comfortable railroad connections. The 25 are all advertised by one man and include "farms" of 30 acres divided into 9 or 12 building lots to suit purchaser, 3 a "farms" and other choice "farms" of 2, 2½, 3, 5, three of 7, and three of 8 a each. From a casual glance at the matter in this catalog F & H believes the intending purchaser can do much better to hire a team and ride through the country and talk with the farmers, a much better bargain can doubtless be secured than by the "select list" of which the above are a part.

SHELTER YOUR MANURE PILE.

Equal weights horse and cow manure, 4 tons of each, were well mixed at the Dominion experiment farm, Ottawa, Ont. A sample was analyzed. The eight tons were then divided into two equal parts and four tons placed in a small waterproof building and compressed by pounding. The other four tons were placed in an open bin, exposed to rain, but all leaching was prevented. Every month for a year, samples were analyzed, the manure weighed and with the following result. The protected bin is designated a, the exposed b.

Higher Prices for Milk.—Under the terms of a new contract just signed, farmers shipping milk to N. Y. city will secure better prices for their product. The Five States' milk producers' ass'n, composed of farmers in N. J., Pa., N. Y., Ct. and Mass., have closed a deal with the Pure Milk Co., whereby the latter is to take all the milk of the ass'n at agreed price for the term of five years. The farmers are to get, net at country shipping stations, 3c qt during Nov., Dec. and Jan., 2½c in Feb. Mar. and Oct., 2½c in Sept., 2½c in Apr. and Aug., 2c in May and July, and 1½c in June. But it is provided that during the first two years the company is to retain ½c qt from all payments, the farmer getting this in the shape of preferred stock in the company now being organized, and thus becoming a shareholder. Therefore, while the prices named represent an average for 12 months of 2½c qt, the farmer will during the first two years receive net cash but 2½c. The total capital of the new company is \$6 million dollars, 20 common and 10 preferred 7 per cent stock. Of this latter, the farmers are expected to acquire in the manner indicated an amount not to exceed ½ millions. The farmers' sale company, conducting the negotiations, says the producers' interests have been protected for and that the new company will start in Nov. with ample cash capital to handle the milk. It is expected that the ass'n will ship soon, 20,000 cans (40 qts ea) daily, and all the milk of one month is to be paid for in cash not later than the 10th of the succeeding month. The ability and integrity of the company in living up to its contract with the farmers will be watched with great interest.

The number of farmers increases every year who make a distinct specialty of poultry just as they do of dairying or grain growing.

With so great a loss of plant food it certainly will pay well to protect the manure pile carefully and to use plenty of absorbents in the stable.

.... OUR NEW

Premium List.

Our Complete Premium List for 1899-'00 is now ready and will be sent free to any address in the United States or Canada, on application.

It is handsomely illustrated and contains upwards of 200 useful and valuable premiums, and some of the greatest and most astonishing offers ever made by responsible publishers.

Now is the time to get up clubs, and by doing a little work for Farm and Home you may secure one or more of the many good things offered, free of cost.

Sample copies and everything necessary to a successful canvass, sent free on request.

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