hens for the first three days, and then any of the hens that will return to the nests after feeding, may be trusted, and it is a good plan to make them return to these nests for as many as four days. It will be quite safe all through the hatching time to allow the hens to return to any one of the nests after being careful that only one hen is on each nest. Better results are often obtained by hens changing nests in this manner. When the chicks are ready to be taken from the nests the best mothers can be selected and each given charge of from 15 to 25 chicks, according to the weather conditions, and the remainder of the hens broken off their broodiness.

P. E. I. T. W. BENSON.

The Colony House and Its Advantages.

Editor "The Farmer's Advocate":-

Just at this season it might be well to bring to the attention of poultry raisers the colony house, which is not as yet commonly used amongst farmers at least. It is quite popular with poultry raisers who have large poultry farms; but it is just as beneficial to the farmer with a flock of fifty to one hundred hens. It seems quite safe to say that all farmers have a flock of hens to which they look for at least a small part of their income, while, unfortunately the colony house is a very rare sight on even our best-kept Ontario farms.

It is well in building to take a pattern from houses which are used on the experimental farms. Illustrations are shown from time to time in our agricultural papers or could be secured through any of the District Representatives or miniatures may be seen in their offices which give a perfect idea of how they may be built.

Let us now consider the situation for the house. So many things have to be considered to make it comfortable for the fowls and convenient for those who attend to the work: Unless one is in possession of certain knowledge it is difficult to imagine anything more annoying than a flock of hens or chickens in a colony house. In the first place, fowls must be moved to these houses after night and at such a distance and to such a place as to lose all connection with former quarters for if they by chance find their way back to the winter hen-house, a habit will be established that will be almost impossible to break and will lead to daily trouble. If fowls have never been moved out to the fields or orchard in this way before, and therefore do not recognize the place, it is wise to leave them closed in for two days and when they have laid and gone to roost once or twice they will naturally turn thither when given their freedom.

When fresh grounds are required, move the house the length of itself, keeping it facing the south so that the sun may purify and sweeten the soil. Consideration must be taken to having access to good water and shade in extremely warm weather.

The nests and roosts must be kept perfectly clean, for while we may not think so, mites and other vermin will infest these places as well as winter quarters, covering the roosts in hot weather, thus driving the birds to roost on fences and in trees. Then they will be exposed to their enemies such as owls which surely kill them on moonlight nights and foxes which are out early in the morning in some localities. After they have formed this habit of roosting outside it is very, very difficult to coax them in again, and when the fall rains and frosty nights come, and birds are often none too well feathered it is not well for their health that they should be exposed. It is quite possible for a moulting hen to perish in one night in a cold storm.

It saves a great deal of work to have a large box, covered with any water-proof material in which several bags of grain may be placed and also other feed which may be required daily. It is very handy to place upon the wall inside, directly over the nests a small curtained box in which eggs may be placed to cool when taken from the nests at the mid-day gathering. The clean, fresh soil and the great range are most beneficial to health, and egg-production is increased by it. Laying hens are a great nuisance about the farm house, lawn and stables. Nearly every man who takes care of stock, dislikes hens about the mangers, etc. We all know how destructive they are about the flower-beds and vegetable garden. The entire neatness of a bed of vegetables or the beauty of a bed of flowers may be destroyed in half an hour when one is not looking. A very small piece of ground will grow enough vegetables for a family for the entire year, and the impossibility of having this where fowls are kept is no small consideration.

The water which stands about barn-yards in the spring and early summer is most injurious to fowls and the cause of some of the most contagious diseases, and strange to say it is often preferred by them to clean fresh water. The removal from these places is wonderfully productive of vigor, activity and health.

After harvest the fowls may be placed in fields of stubble where quantities of grain will be gathered by them that otherwise would be lost entirely, and in this season many eggs are gathered at a very small outlay. Then when we consider the hen as a bird of the air, there is no other place where she lives so close to her natural haunts or where she appears as well and happy as in the colony house.

Durham Co., Ont. M. H.

HORTICULTURE.

A Difference of Opinion.

Editor "The Farmer's Advocate":-

I noticed a letter in your issue of April 9th, from a believer in home-mixed fertilizers, and it reads to me as if it was just possible the writer is interested in the sale of what he recommends for "home-mixing".

I would like to refer to a few points in connection with this subject, but not wishing to appear under "false colors" I want to say to my brother farmers that I am interested in selling fertilizers either factory-mixed or for home-mixing, as the purchaser may prefer. Now, instead of criticising the District Representative who simply sent in the facts as he found them to the Agricultural Department, let the writer of the article tell us of some incident where the mixture he recommends has been used and has produced results as good as those produced by the 3-6-10 factory-mixed that he refers to on any soil. Personally I would not use his mixture at all if I wanted good potatoes. Nor would I use any mixture with nitrate of soda alone as the source of nitrogen, as it would all be available at once and would make, in my opinion, a rapid growth of vine at the start, but no nitrogen would be

Apple Blossoms.

"The flowers anew returning seasons bring."

left to sustain growth at the time it would be most needed, that is, when the tubers are being formed. Nor do I think the three elements he recommends would mix in a way to be easy of application so as to obtain an equal proportion all over the acre.

Then as to price, no doubt home-mixing is cheaper from a dollar and cents valuation of the "ton", but it is never so well mixed nor so finely ground and will not produce the best results. In any case as the 3-6-10 would cost, I believe, $9.-50 for 500 lbs. the saving would not be more than $2.00 per acre taking Mr. Hunter's figures. This on 296 bushels is less than one cent per bushel. Now, it seems to me, if 296 bushels of potatoes can be grown to the acre by the use of 3-6-10 mixed fertilizer, we need not worry about the extra cost, but will leave it to Mr. Hunter and his friends to experiment with their own mixing till they are able to tell us of as good results, I know of farmers who bought raw materials last year intending to do their own mixing, but in the rush of spring work, put off the mixing and have it in their barn to-day, unused. As to European practices, I am not familiar with them to-day, but I was in the business in Scotland many years ago and there was no such provision as "guaranteed analysis" there as there is in Canada to-day to make sure the farmer gets what he orders. Any manufacturer of fertilizer has to register his brands at Ottawa, furnish a sample and can be held responsible if his goods are not what the analysis, which must be on every bag, calls for.

I have been using factory-mixed fertilizers on my raspberries, and last year's crops yielded me over $400.00 per acre after paying for fertilizer, crates and picking. I used it on tomatoes and got 332 bushels from one thousand vines and I am going to use 3-6-10 on potatoes this year as well as repeating it on raspberries and tomatoes. I invite any one to come and see the results. Results speak louder than words.

Lincoln Co., Ont. PETER BERTRAM

Strawberries and Lime.

One important function of lime in soil is to assist in the conversion of inert plant food into available nourishment for the crop but further than this, questions may arise as to the adaptability of different crops for thoroughly limed soils. Some crops we know would be dependent upon the lime content, such plants as the legumes are lime plants in the extreme, but there are others which seem to do tolerably well and in fact best when only a very moderate amount of lime is present or when the soil may be said to be neutral.

One experiment carried on with strawberries, and other small fruits reveals this fact in the results. In this particular experiment three plots were used—plot one was given 2,500 pounds hydrated lime; plot two, 1,500 pounds and plot three was used as a check with no lime. Taking these plots individually and comparing them relative to the number of plants wintered and the dates of bloom we find a noticable difference. In plot one, the number of plants at time of mulching was 228 while those living throughout the winter and healthy when the mulch was removed amounted to 149. The date of the first bloom was May 10th and they were in full bloom on May 23rd. In plot two given 1,500 pounds of lime, 251 were mulched and 212 were alive when the mulch was removed. The first bloom was noticed on May 3rd and they were in full bloom on May 18th. Plot three where no lime was used had 238 plants at time of mulching, and 234 were alive and healthy when the mulch was removed. On may 3rd the first blossom appeared and they were in full bloom on May 16th.

A resume of these figures reveals the condition that where no lime was used a larger number of plants survived the winter and that the bloom was earlier in the season.

The results of another experiment show the same condition relative to time of bloom but in addition to this there is a difference in the fruit and plants. The individual fruit on limed plots weighed 3.43 grams and unlimed plots 3.01. The relative weight of total fruit was in the proportion of 100 to 119 on limed and unlimed plots respectively, while the plants showed a relative total weight of 100 to 127, under the same conditions. This experiment shows the unlimed plants to be more vigorous and healthy while those on the limed plots produced a heavier berry. The reason for this is attributed to the fact that a larger number of berries were produced on plants on the unlimed soils.

Referring to natural conditions it is common to see a profuse crop of berries on plants situated on low land or hill-sides and associated with ferns, wintergreens and other plants which naturally prefer acid soils. The cultivated berry is not a direct off-spring of the wild plant but their habits of growth and general characters are so similar that the same conditions of soil and climate are preferred by both.

If an excess of lime is liable to depreciate the chances of wintering or decrease the total quantity of fruit produced, such an undesirable condition of the soil might be remedied by an application of acid phosphate. But first the grower must ascertain by experiment the relation of his soil condition to the crop to be produced and govern his operations by that information. No one or two experiments should hasten a grower into action that would be altogether unwise under his particular conditions.

Spray Early for Peach Leaf Curl.

If peach growers neglect to spray on the dormant wood with winter strength of lime sulphur the one opportunity of controlling the peach leaf curl has been neglected. This disease is a fungous growth which finds a home beneath the epidermis of the skin of the leaf and spraying subsequent to the coming out of the leaf will have no beneficial results. In order to control the disease they must be sprayed prior to the unfolding of the leaf from the bud and if this spraying can be timed as near as possible to a day or two before the young buds burst the best results will be obtained from the application of spray mixtures.

In some districts the disease has caused material waste but where a thorough system of spraying is practiced or where peaches have not been grown to any extent in the past the orchards