and autumn, and even in winter, for the carnation, where it does well, has a fine color value of foliage in winter, which makes it most useful to all who care for good color in their gardens.

What carnations are the best for the open air? The kinds of carnations popular up to the present day are well known by what is seen at the Canadian shows, and in the florists' periodical, like the *Floral Magazine*, *Harrison's Cabinet*, and, indeed, all similar periodicals up to our own day, when I began to insist that all flowers should be drawn as they are. The artist should never be influenced by any "rules" or "ideals" whatever, but be allowed to draw what he sees. This all conscientious artists expect, and it is the barest justice. If we succeed in raising what we consider perfect flowers, let the artist see them as they are, and draw them as he sees them. Otherwise we have the confusion of drawing impossible hybrids between what he sees and what he is told is perfection in a flower. It was the want of this artistic honesty, so to say, which has left us so worthless a record in illustrated journals of the past, where the artist was always told to keep the florist's "ideal" a to what the flower should be. Hence the number of plates of flowers of many kinds, all drawn with the compass and quite worthless as a record!

(*Gardening.*)

EVER-BLOOMING ROSES.

The class of over-blooming roses is what the masses should depend on for summer roses, writes Eben E. Rexford in a valuable article on "The Favorite of the Flowers" in the May *Ladies' Home Journal*. They are mostly teas, Bourbons and Noisettes. They begin to bloom shortly after planting, and continue to flower until the coming of cold weather. If the branches are cut back, from time to time, and a good soil be given them, they bloom very profusely. While not as large as the hybrid perpetuals they are quite as rich in color, and as sweet, and much more free in flowering qualities. They are so easily grown that they should be selected by those who love roses, but do not feel equal to the task of attempting to grow the other varieties. If you give them a good soil, and keep the old flowers cut off, you need not fear of failure with them No other flower repays you so richly, because no other flower is so beautiful. With a bed of five or six feet square you can have all the flowers you want throughout the season, for vases in the house, for personal adornment, and to give to your friends, without, at any time, robbing the bushes wholly of flowers.

FACTS CONCERNING APPLE SPOT.

The main points to be remembered in connection with this malady are that it is caused by a minute parasitic fungus, a low form of plant life, which by living on the leaves and fruit of the apple, prevents assimilation in the former and the development of the latter. It is not so generally known that the same fungus attacks both the leaves and the fruit. A few facts to be remembered in connection with successful treatment are: 1. That it is perpetuated by spores, which take the place of seeds. 2 That these spores, formed in the autumn, live over winter upon the old leaves, fruit and young branches. 3. That these germinate in the spring as soon as conditions are favourable, which is usually about the time the young foliage is developing. The efficacy of the copper-salt remedies have now come to be generally recognised, and the fruit grower who does not use these remedies is neglecting a simple precaution in direct opposition to his best interests. Ammoniacal copper carbonate and dilute Bord aux mixture (half strength) are now the leading fungicides for apple and pear scab and grape mildew.

JOHN CRAIG,

Horticulturist, Experimental Farm, Ottawa.

THE BEE-MASTER.

Advice to beginners in Apiculture.

In order to make a good start, and to succeed with your bees from the very beginning, I advise those who intend to keep bees to follow the subjoined directions:

1. Go and see the best hiveries and the most successful bee-masters you can hear of; adopt their opinions and their method of treating their bees. 2. Buy, or borrow, some one or more of the best treatises on apiculture. First, I can recommend "The A. B. C. of Bee-keeping" by A. J. Koot, if you wish to be successful from the commencement. 3 Subscribe to one or two of the best Bee-keeper's periodicals, such as "The American Journal of Apiculture," and "Gleanings in the management of Bees." 4. Get a good fumigator—Clark's or Bingham's—and a good veil of silk-net, &c., to guard against the stings of the bees. 5. Go to some trustworthy bee-master's, in the month of May, but take care that he has no rotten brood in his hives. Buy a hive of bees, *black* or *Italian*, which ever you can get. If of the black kind, try them first, and if, after a fair trial, they do not please you, kill the queen, and introduce some good Italians. If the wings of the queen be not cut already, get the man from you whom buy the hive to cut them for you. 7. Now, settle your plans and the way you mean to treat the bees, and adhere firmly to them, doing the work promptly and at the right time. 8. Do not allow more than one swarming—in other words, do not try to do more than double your stock every year. 9 When your bees swarm, if the wings of the queen-bee are cut, transfer the old hive to a fresh site, and in its place put an empty hive. Look out for the queen on the ground before the entrance to the hives (keep the grass land bare of grass in that spot for that purpose) through which the swarm gets out; catch her and put her in a cage, and when the bees find that their queen is lost, they will return to the place where the old hive used to stand, and walk into the new one. When plenty of them have got in, let the queen go in among them. 10. Use the simplest and most perfect improvements, and the strongest made hives, with the least complicated mechanism about them. I should advise you to begin with a dove tailed hive, or some simply constructed one. II. Employ invariably whole leaves of foundation-comb for the brood frames, and only *despartances* in the surplus boxes. This will greatly assist in preventing false drone cells in the brood-chamber. Observe that every square foot of workmen comb is equal to a dollar saved. 12. Cut the wings of your young queens after coition, or leave them uncut until next spring; then, cut off one wing, which will show that your queen is a yearling, and the following spring, cut off the other wing. This will show that she is a 2 year-old. Later in the season, replace her by a young queen: the laying of eggs will be the better for the change.

From the *American Bee-Keeper.*

(From the French.)

J. B. ST-MARC.

Manures.

EXPERIMENTS ON SWEDE.

The bulbs were weighed after the roots and tops had been removed.

No. of Plot.	Manure per acre.	Cost per acre. £	s.	d.	Weight of Swedes per acre. Tons	cwt.	lbs.
I.	No manure.....				13	19	14
II.	5 cwt. Superphosphate. 1 cwt. Nitrate of Soda..	1	4	9	24	13	21
III.	5 cwt. Superphosphate	0	14	0	23	0	42
IV.	5 cwt. Superphosphate. 5 cwt. Kainit..... 1 cwt. Nitrate of Soda..		9	0	25	1	7
V.	4 cwt. Phospho Guano. 2 cwt. Kainit	2	4	0	26	11	7
VI.	4 cwt. Phospho Guano..	1	19	0	36	12	49
VII.	2 cwt. Superphosphate. 4 cwt. Basic Slag..... 1 cwt. Nitrate of Soda..	1	3	9	28	17	14
VIII.	7 cwt. Basic Slag..... 1 cwt. Nitrate of Soda.	1	4	0	27	4	105
IX.	5 cwt. Superphosphate. 1 cwt. Nitrate of Soda.. 2 cwt. Salt	1	6	9	26	16	91
X.	5 cwt. Superphosphate. 1 cwt. Nitrate of Soda.. 4 cwt. Gypsum	1	8	9	25	11	42
XI.	No Manure.....				14	0	7

No farmyard manure was used in this experiment or in that of the previous year, on swedes.

MR. BINNS asked his soil what it needed to grow a good crop of strawberries. "Nitrogen!" was the answer every time. See what he got by giving the soil what it needed? You never heard of soil so ugly that it would not answer a civil question about fertilisers It will go into details too and tell whether clover or nitrate is the cheaper form of nitrogen. It may prove, even in far off Washington, that the latter is the cheaper.

PLOTS. HENRY STEWART comments on the fact that some of the experiments station teachers declare that culture by plots cannot be depended upon for accurate results, and that experimen. made on such plots are not of general value. This comes as a most unsatisfactory comment on the 50 years of experimenting that has been going on at the Rothamsted Station in England, where Sir J. B. Lawes and his assistants have accumulated such an enormous mass of invaluable information that has been accepted everywhere as standard law for farmers in every civilized country. In fact, there is little other information of the kind available.

We regard all such declarations by the station people as more evidence of "youngness". Experience will teach them better."

New-Yorker.

BONES

THE R. N.-Y. has often advocated the burning of bones as a cheap and easy way of reducing them to a proper condition for use as a fertiliser. There are cases where burning is advisable chiefly because this is about the only way some farmers can get them into a fine meal or powder. As between a whole bone and bone ash, the latter is preferable, but if the whole bone could be crushed or ground into a fine meal without burning it would be worth far more for fertilising. It is a fact that bone ash is very slowly soluble as compared with a superphosphate or fine raw bone. Take two similar bones—burn one to ashes and grind the other to a fine meal, and then apply heat in the form of steam. The steamed bones will be twice as valuable as the bones ash for immediate use. At the same time there are cases where bone burning is economical because of the great cost of crushing bones with ordinary tools.

"FACTS FOR CAROLINA FARMERS."

The Charleston *News and Courier* in a quiet but ironical way pokes fun at the bulletin reports of the South Carolina Agricultural Experiment Station, a copy of which it received recently containing three articles on cotton seed meal. The *News and Courier* gives extracts as examples of the contents of the bulletins. These extracts deal to an extravagant degree in "big dictionary works," abstruse scientific terms and phraseology quite intelligible to a learned chemist, yet to those who are not analytical chemists, but simple plain farmers, they present the same difficulties, we imagine, which would confront them should they undertake to decipher the Chinese characters that adorn our tea-chests. Here is a simple:

"Luteocobaltic chloride gave a precipitate of the peculiar color of that produced with this reagent by pyrophosphates of the alkalies, although