

did crop of Orange Globe mangel at the home farm, for which nothing but dung was used. Now I hold that dung is alto-gether inferior as a fertiliser to chemical manures, but in this instance preference was given to it, because the fertility of the soil had been well sustained for some years previously, and the barley which the mangels followed had a dressing per acre of 1 cwt. of nitrate of soda, $\frac{1}{2}$ cwt. muriate of potash, $\frac{1}{2}$ cwt. mineral superphosphate and $\frac{1}{2}$ cwt. steamed bone flour. Care was taken to obtain pure manures separately; they were mixed under careful supervision, and drilled with the corn. An excellent crop of barley was harvested, and it was considered there was a sufficient residue of fertility in the soil to warrant the avoidance for once of any outlay upon chemicals for the roots. The result proved the correctness of the decision, for the mangel crop was decidedly superior to that of all the five other farms which I then had in hand.

For land low in fertility the dung and chemicals are both indispensable for mangel. Before all things we must try and render the crop as safe as possible from the effects of trying alterations of weather, and especially should our aim be to ensure brisk robust growth and power to withstand drought. Sown on the ridge, with plenty of dung below, and the soil rich in fertility, brisk growth follows germination, the roots lay hold of the dung and once the plant is well established in it we need care very little about drought, for farmyard manures contains 70 per cent. of water. The advantage of a liberal use of it for this crop is therefore obvious, it is equally clear why we require to have all of it in the furrows. Surely it is also self-evident how admirably a mixture of chemical manures is calculated to store the soil of the sides and base of the ridge with fertility? It is true enough that dung contains all the essential elements of plant food, but dung is a costly article, not often to be had in sufficient quantity for general purposes except on farms near large centres of population.

That much money has been lost on root culture there can be no doubt, especially when superphosphate alone has been used. Nitrate of soda and mineral superphosphate in equal quantities—say $1\frac{1}{2}$ cwt. of each, with the addition of 4 cwt. of common salt, is a safe mixture per acre, which experience has shown to be suitable for most kinds of land. There is no doubt that potash salts may also be used with advantage in some soils while in other soils it is not wanted at all, and therefore, it remains for those who do not find results from the safe mixture entirely satisfactory to test the potash question for themselves, which after all, is a very simple matter. Only pray give preference to muriate of potash rather than kainit, for muriate of potash, 80 per cent. basic, contains 41.9 per cent. of potash, while kainit 24 per cent. containing only 9.6 per cent. of potash. Muriate is $4\frac{1}{2}$ times more valuable to the farmer than the kainit, for though kainit is apparently the cheaper of the two, yet in reality it is not so and the muriate is the most soluble in water. One other important fact about potash is that it is not washed away by rain, soil holding it most tenaciously.

In using chemical manures I have invariably mixed the whole of them thoroughly and sown the mixture along the furrows before closing them to form the ridges for drilling. To withhold the nitrate of soda for about a month after the sowing and then to apply it as a top dressing is, in my opinion, a mistake. If we were certain of enough rain to dissolve and wash in the nitrogen to the roots the top dressing would then go to insure us against any loss of it but are we? It is only in an exceptionally wet season that there could be any risk of loss of nitrogen, and it is all important that it should enter the soil in combination with the mineral manure for a crop which is certain to be in full growth so quickly after the sowing.

EAST ANGLIAN.

NON-OFFICIAL PART.

Conservatism vs. The Rage for Novelties.

The Seed Annual for 1890, issued by D. M. Ferry & Co., of Detroit, Michigan, has reached our table. Its cover this year is especially artistic and attractive, and its contents as usual, interesting and instructive. Ferry's seeds are thoroughly reliable, and always come true. The directions given in the Annual for the cultivation of both flowers and vegetables are so full and explicit that no one can fail of success who uses their seeds and follows the instructions.

D. M. Ferry & Co. are very conservative, both in offering new sorts and in their claims for them when offered; but they take pains to inform themselves as to the true character of all new varieties, so if some much lauded novelties are not found in the Annual, the probability is they have tested them and found them of no value.

A request sent to the firm at Detroit, Michigan will bring you a copy of the Seed Annual for 1890 by return mail.

Valuable to Know.

Consumption may be more easily prevented than cured. The irritating and harassing cough will be greatly relieved by the use of Hagar's Pectoral Balsam that cures, coughs, colds, bronchitis and pulmonary troubles.

CONSUMPTION CURED

An old physician, retired from practice, had placed in his hands by an East India missionary the formula of a simple vegetable remedy for the speedy and permanent cure of Consumption, Bronchitis, Catarrh, Asthma and a Throat and Lung Affections, also a positive and radical cure for Nervous Debility and all Nervous Complaints. Having tested its wonderful curative powers in thousands of cases, and desiring to relieve human suffering, I will send free of charge to all who wish it, this recipe in German, French or English, with full directions for preparing and using. Sent by mail, by addressing, with stamp, naming this paper, W. A. NORRIS 820 Powers' Block, Rochester, N. Y.

ADVICE TO MOTHERS.

Mrs WINSLOW'S SOOTHING SYRUP, for children teething, is the prescription of one of the best female nurses and physicians in the United States, and has been used for fifty years with never-failing success by millions of mothers for their children. During the process of teething its value is incalculable. It relieves the child from pain, cures dysentery and diarrhoea, griping in the bowels, and wind-colic. By giving health to the child it rests the mother. Price 25c. a bottle.

A Plain Statement.

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FOR SALE. — Norman cattle, Ayrshire cattle, Chester-white and Berkshire pigs, Plymouth-Rock poultry. Apply: Honble Louis Beaubien, 30 St. James Street, Montreal.

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A Night Alarm.

I awoke last night to find my little boy so bad with croup that he could hardly breathe, but on giving him some Hagar's Yellow Oil on sugar, and rubbing his chest, throat and back with it also, he soon was sleeping quietly and awoke next morning completely cured.

JOHN ELLIOT, Eglinton, Ont.