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Notes by the Way.

Mr. John Baptist's name (v. Dec. No.) puzzled us a good deal, as we missed the final e and it evidently was not a French Canadian family name. But, as an old French proverb says: Tout vient à fin à qui sait attendre, and so it proved, for a week, or so, after we sent the translation of the article on Mr.

Baptist's farm to the printers appeared the following in one of the Montreal papers:

HOW BAPTIST SPELLS HIS NAME.

A correspondent says: Baptist, of the Montreal football team, spells his name without the final "e," his grandfather—a genuine Scotchman as ever came to Canada—made the name a household word in the lumber district of Three Rivers; and with the Bishop of Montreal as grandfather, on the maternal side, the lad classes British-Canadian.

We then remembered meeting an old "shanty-man" at Joliette, some 25 years ago, who was named Macbeth; but who could not speak a word of Gaelic, Scotch or English, nothing but French. No doubt, there are many descendants of old settlers, both Scotch and English, in a like case.

Mangels.—We have always held that, with proper cultivation and plenty of nitrogen, there is hardly any limit to the weight of mangels that can be grown on an acre. In the S. E. of England, from 25 to 30 tons is reckoned a good crop; 40 tons are not uncommonly seen, but the crowning crop of the year is one grown this year near Reading, Berkshire, on land we know well. The previous crop was a two-year-old rye-grass lea; it was ploughed 8 inches deep and subsoiled 6 inches below that in November '94. Nothing is said about the manure applied, but the drills were 32 inches apart, and the plants 12 inches distant from each other in the rows. After trimming all the leaves off and freeing the roots from soil, the produce of an acre weighed all but 119 tons of 2,000 lbs., or, allowing a bushel of ordinary roots to weigh 42 pounds, this wonderful crop returned 5,646 bushels to the acre. And its value? Well, Prof. Wrightson calculates the price, for home use, of a gross ton of mangels to be worth 10s. say, \$2.40, at which rate the crop would be worth \$252.00!

We are happy to see that farmers in general are giving more attention to root growing. Nobody dreams of such crops as the above mangel-crop being grown here, but now the value of swedes, Belgian carrots, &c., is better appreciated, there is every prospect of a far greater number of acres being put into hood crops than ever has been known in this province. We have always held that one great reason for the neglect of root-growing was the sort of idea floating in the air that chemists found so much water even in the best specimens that they were not worth the trouble of cultivating. No one, however, who has once laid up a score or two of tons of swedes or mangels but must have felt how very untrustworthy science was in this case, and we were highly delighted to find the following very sensible remarks in a late number of Hoard's Dairyman: "The water of succulence whether in grass, silage, green fodder or roots, does seem to have a stimulating or nutritive value that the chemists' analysis cannot find. What it is, or why it is, cannot be easily or satisfactorily explained, unless it be that it carries the nutriment in such a soluble state that it is both more easily and more fully digested. The chemists apply a somewhat similar theory, at least, to the action of fertilizers in the soil. The nitrogen, the phosphoric acid and the potash must be dissolved before the plant can utilize them, and in like manner, the protein and the carbohydrates must be dissolved before they can be appropriated by the animal,

and there is no solution so perfect and homogenous as that made by nature in the vegetable world." (1)

Old readers of this periodical may perhaps remember our favorite illustration of the chemist's incapacity to distinguish between spring water and the water in the roots: In Kent and the other S. E. counties of England, swedes will just keep sheep going; in Aberdeenshire, Forfar, &c., they will fatten big bullocks with no additional food but oat straw. Is it climate that makes the difference? Hardly; for whereas the roots grown on the Downs above Brighton are poor in the extreme, those grown six or eight miles from that watering place are of first-rate quality. But in all these cases, the chemist cannot, by analysis, tell one which is the better swede or mangel: the cattle and sheep can, though! By the bye, our friend and pupil, M. Séraphin Guévremont, sent us a bag of carrots last week, from Sorel, which are a credit to the sandy soil of that place. Whereas the carrots we had been using took two hours to cook, the Sorel lot take hardly 30 minutes! And some swedes, from that district, are of the same tender nature, without, a single lump in them.

Feeding for butter.—It is a regular case of practice versus science, is this doubt of the possibility of altering the quality of milk by altering the food of the cow. But all agricultural chemist are not on the same side in this matter. Prof. John Campbell, of Glasgow Technical College, evidently has a strong opinion as to the alteration of food making a difference in the richness in butter-fat in milk. We have often advocated the feeding of milking cows with pease-meal and crushed linseed, when butter-making was this object, as unless the albuminoids (protein), of which these are full, be largely present in the food of animals subjected to such calls upon their system, their health and constitution must be both greatly weakened. Mr. Horsfall, the great London milkman, as a leading feature of his feeding-practice, attaches the greatest importance to the maintenance of the condition of cows giving a large yield of milk. "I am able," he says, "by the addition of bean-meal in proportion to the greater yield of milk, to avert the loss of condition in cows giving from 16 to 18 quarts a day." And note, especially, the following: "Albuminous matter is the most essential element in the food of the milch cow, and any deficiency in its supply will be attended with loss of condition, and a consequent deterioration in the quality of the milk." Pease, of course, are pretty much the same in composition as the horse-bean.

Mr Campbell agrees thoroughly with Mr. Horsfall; he gives the following practical rule for feeding milch cows:

Give a natural food, and add albuminoid foods until there is no increase in quality and increase the quantity of food mixture so obtained until the quantity of milk also ceases to increase. If the natural food used as the basis of the mixture be unnaturally grown, addition of albuminoids may be expected to improve quality. Otherwise, increase in quantity of food would.

To fully answer the general question already asked why so many cows yield so little milk, we must harp back again to our principle that milk is the product of vitality of living substance.

(1) As the impossibility of making any mineral water equal to those formed in the natural springs fully shows. Ems, Carlsbad, Hunyadi, waters are immutabile.—Ed.

And this question properly put is this—Why is the vital substance not fully active? The answer is—Because many men have not realized and taken full advantage of the principles demonstrated by the great breeder. Because those who have the care of animals do not realize the great adaptability of milk cows to variation in environment. Because the feeding is not sufficiently nutritive to bring out the great capabilities of some cows.

And this is also Sir John Lawes' practice, though he uses decorticated cottonseed-cake to furnish protein instead of beans, the former being the cheaper of the two sources of that element. It will of course be seen by the above that both Mr. Horsfall and Professor Campbell are thorough believers in the possibility of feeding quality, i. e., butter-fat into milk.

Dairy-shorthorns.—Professor James Wilson, of the Iowa Experiment Station, has been giving some very interesting details of his experiments on 77 days feeding Holstein, Shorthorn, and Jersey cows. We call particular attention to the passage we have underlined.

Facts About Feeding.—Prof. James Wilson, of the Iowa Experiment Station, in an address before the Iowa Stock Breeders' Association, detailed some very interesting facts gained from 77 days feeding experiment with Holstein, Shorthorn and Jersey cows. From the same we take the following extracts:

Milk is a highly nitrogenous product, fat is carbonaceous. When the ration is constituted for milk, fat is not likely to be formed. Fat is deposited in the fat tissues proper, and also in the muscles between the fibres. The dairy cow is generally a matured animal not requiring, like growing animals, more protein for the support of her body than is necessary to maintain it, not more carbohydrates than is necessary to keep her warm outside of the fat which she turns into her milk. If she gets more carbohydrates than she requires to make milk or keep her warm, it is either wasted or is deposited as fat in her body. During the seventy-seven days alluded to, with the ration I have described, the two Jerseys neither gained nor lost. One Short-horn cow gained twenty-six pounds and the other Short-horn cow gained ninety-eight pounds, one fifty-two pounds, one ninety-one, and the fourth Holstein cow lost twenty-six pounds.

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Much more care must be taken in compounding rations for the easy fattened dairy cow than for the one less disposed to fatten, when gain in weight is not desired. Iowa meats are made with grass and maize almost entirely, without much attempt to add more protein, even in winter, justified by the low price of corn, and not only so, but the dairy products of the state are made from the same ration in a majority of cases. The dairy products of the state from this ratio excel all others, as maize gives butter and cheese fine flavors, but cows with a tendency to fatten are spoiled for dairying by the ration. Added weight is an element of value when the cow is turned over to the butcher at the end of her milking period, and, when the farmer desires to raise calves from his dairy cows for feeding, the fattening disposition is valuable, and to the extent that the cow should be put in good order during winter to fortify her against the drain of summer milking.