

the corn receiving nitrate of soda—costing \$4 00—gave an increased yield of more than 19 bushels as compared with that receiving no fertiliser. In every case in which nitrogen was used, the yield was far above the average. So the extra corn produced by the nitrate of soda cost just 21 cents a bushel plus the expense of threshing &c. Would that pay?

Mr. Thorne, of the Ohio station, talks of *wheat growing* in that State. It seems that “during the 40 year period under consideration, there have been seven seasons in which the average yield of wheat in the State of Ohio has fallen below 10 bushels an acre.”

And yet the Ohio farmers are now spending yearly a million dollars in artificials! The average crop of the last periods—1860 to 1869 and 1880 to 1889 inclusive—has been as follows: for the first decade, 11 40 bushels an acre, and for the second 13 70 bushels. One district in the southern, only yielding 8 2 bushels in the sixties and 9 7 bushels in the eighties. Is it worth while to grow wheat for such miserable crops as these? Surely the climate or the soil must be in fault. Could not the farmers grow some other crop, one better suited to their district, sell it, and buy their bread-corn. Many a county in Scotland grows no wheat at all; and the reason is because it does not pay.

Potatoes, with rows 3 feet apart, were experimented on at the Rhode-Island station. Why 3 feet apart? 24 x 10 inches is plenty of space for all the finer sorts. If any one plants Champions, 40 inches x 15 will not be too much. Where whole tubers were planted, the yield was largest.

Says the report of the Nebraska station: “Results of our experiments go to show that, studied under the conditions that now largely rule in the sale of *distinct dairy products*, milk and butter, the breeds do not present the same points of comparison, but are divided into two classes, one giving large quantities of milk, the other yielding smaller quantities of milk rich in butter fat. In the milk-class, the average cost of a quart of milk is less than in the butter-class, and in the butter-class the average cost of a pound of butter is less than in the milk-class.” This station, again, was unfortunate in its selection of their shorthorns. (1) In the case of the Holsteins, the cost of the rations was considerably increased by the fact of their having had, as a coarse food, timothy hay, “one of the most expensive of foods,” and one which probably did not aid much in milk production.

At the *New-York Cornell* station, hens fed on a highly nitrogenous diet, consisting of bran, shorts, cotton-seed-meal and skim milk were compared with hens eating carbonaceous food—cracked corn and corn-meal dough with the following results:

Eggs laid and gain in weight—hens.

	Live weight		Loss.	No of eggs laid.	Weight of eggs laid.	Average weight of eggs.	Gain in weight, including eggs
	July 26	Nov 27					
Lot I.—Nitrogenous .....	lbs 23 53	lbs 21 31	lbs 2 22	79	lbs 8 25	ozs 1 67	lbs 6 03
Lot II.—Carbonaceous .....	lbs 23 56	lbs 22 00	lbs 1 55	26	lbs 2 92	ozs 1 80	lbs 1 36

But, *dear reader*, the eggs laid by the nitrogenous food hens “were small, with a disagreeable flavour and smell, watery albumen, small, dark coloured yolk, and soon spoiled, while the eggs of the hens fed on carbonaceous food were large, of fine flavour, natural smell, large, normal albumen, an especially large, rich, yellow yolk, and kept perfectly in the same brine as the others for several weeks. (2)

1, There are shorthorns and shorthorns.  
 (2) Yolk, if you like

A. R. J. F.  
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Shallow planting of cabbages gave, at the same station, a larger percentage of good heads than deep planting. Still, if I were planting any one of the *brassicæ*, I should plant deep in hot weather, on account of the greater chance the roots would have of getting into moist soil.

Of grasses that stood the winter two years running, at the South-Dakota station, special mention is made of tall meadow oat, wood fescue, Kentucky blue grass, meadow fescue, creeping bent, red-top, sheep's fescue, orchard-grass, Rhode Island bent, hard fescue, and timothy. Of the clovers, common red, mammoth red, alsike, white, and lucerne, lived through the two winters, even under the test of close pasturing the second season.

Cotton-seed meal was compared with *wheat-bran*, as food for the production of butter, at the Pennsylvania station. The animals experimented on averaged 900 lbs. in weight, and were mostly grade cattle of all sorts. Six pounds of cotton-seed meal per head per day did not affect the health of the cows! The substitution of the meal for bran increased the yield of milk by about one-fifth: this is important, for supposing a cow gives to day 40 lbs. of milk on bran, she would, if the statement is correct, as of course it is, give, with a diet of the meal, 48 lbs., = 4 of a gallon more, worth, at Montreal milkman's prices, nearly 20 cents! The percentage of butter-fat in the milk was not materially changed, but the judges at New-York, to whom the butter was sent “for grading,” rated the cottonseed-meal butter considerably lower than that made from cows eating bran.

A warning.—Three young calves were given daily a pound of cottonseed-meal mixed with hot water, and added to the skim-milk they received. *Two died!* “but the third has made a fair gain.” Sir John Abbott, the premier, lost several of his Guernsey calves in the spring of 1881 from giving them the same thing. Linseed, or, as the United States people call it, flaxseed, and pease-meal, are the proper foods to mix with skim-milk for young calves. After they are three months old they may eat anything.

Last year, at the Vermont station, time and labour were wisely—very wisely—economised by mixing the bouillie-Bordelaise with Paris green, and sprinkling the potatoes with the combination. As a fungicide, the copper-mixture seems to have answered, but so many failures have occurred with it, that we require a good many more trials before it can be called a specific.

ARTHUR R JENNER FUST.

NON-OFFICIAL PART.

Clinton Clippings

“I had for years been troubled with dyspepsia and sick headache and found but little relief until I got Burdock Blood Bitters which made a perfect cure. It is the best medicine I ever used in my life.”—Hattie Davis, Mary St., Clinton, Ont.

Could Scarcely See.

Mrs. John Martin, of Montagne Bridge, P. E. I., writes: “I was troubled last summer with very bad headaches and constipation and sometimes could scarcely see. One bottle of Burdock Blood Bitters made a complete cure of my case, and I wish you every success.

Regina Ripples.

“I took six bottles of Burdock Blood Bitters for liver complaint, headache and dull stupid feeling, but now I am entirely well and healthy, having also a good appetite which I did not have previously.”—Mrs. T. Davis, Regina, N.W.T.