

	Water.	Albuminoids.	Carbohydrates.	Fat.
Potatoes.....	75 0	2.1	21.8	0.2
Swedes	87 0	1.3	10 6	0.1

The albuminoids and carbohydrates and fat in the above are the digestible nutrients, including fibre, of which the potato contains 60 % more albuminoids, 100 % more carbohydrates, and 100 % more fat than the swede, to say nothing about this greater concentration as a food from the absence of 12 % of water. In other words, potatoes are *theoretically* worth about twice as much as swedes, and I have always found them about the same in practice, though as, nowadays, the cattle only get the small ones, which are inferior in every way to the marketable tubers, it is hardly fair to compare these dwarflings with a well-grown swede.

As I have often had occasion to remark, I do not think it pays to boil potatoes for any animal except for pigs, and in so highly-waged a country as this, I am doubtful even as to that.

Draught of implements. —

The Missouri Agricultural Station has lately been the sum of certain experiments in, or tests of, tillage implements. I am fond of experiments, but I confess that when it comes to sifting the soil of a field through sieves with meshes one-sixtieth of an inch in size, I am not surprised to find that "it was so slow of use that it was abandoned"!

The *harrows*, properly so called, were tested with implements like the Acme, the Randall rotary, &c., which are in reality *cultivators*, and the order of draught, passing from the lightest to the heaviest, is: the smoothing-harrow, the square toothed harrow, the spring-toothed harrow, the Albion, Randall, Acme, and Lubin. The *cut-away* disc-cultivator, the same as the Randall except that part of the disc in the former is *cut-away*, was not used.

The depth of cut: Randall deepest, Acme shallowest.

Best surface: Acme and smoothing harrow.

Best pulverisation: Acme and smoothing harrow.

"The lightest draught harrow draws thirty or more per cent harder than the average draught of plough." This statement I confess astonishes me, and the reason given is

that "the plough is a double wedge and therefore compresses the soil," the very reason why I should have thought the draught of the plough would be heavier than that of the harrows: but I cannot argue against the evidence of the dynamometer! The subjoined is a note of the principal deduction made from the tests. I call attention to No. 3, to show how awkward the clumping together of the harrows and the cultivators is. The meaning of this is, that breaking up the land by means of a Randall or any other cultivator, will not, in the long run, be more economical than doing it by means of a plough.

"I No one harrow is sufficient for the best tilth of a farm.

II. The harrow needed varies with the soil and its condition.

III. Harrows, as substitutes for plows, do not save force.

IV. Harrows till shallower than supposed.

V. The bottom of the tilled area varies widely in regularity.

VI. Wedge teeth and flat teeth with a front slant compress soil and are probably good for light soils.

VII. Teeth lifting dirt to the rear loosen soils best

VIII. One harrow may break the clods best but not leave as much fine soil as another.

IX. Each harrow tried had a place to which it is best adapted, but for a general purpose harrow on a heavy soil, depth of cut, looseness

of soil, ease of draft, and pulverization, being considered the leading demand of a harrow, the Randall, on the whole, proved the most satisfactory, although having the weakness of forming a bad bottom and of ridging the land. The Albion, being lighter of draft, proves a good machine, especially for the purpose for which it was designed."

OUR ENGRAVINGS.

Cheviot Sheep.

Black-face Scotch.

Cross-bred steer, Shorthorn and Aboriginal British.—

Any one who saw Mr. Cochrane's heifer by Royal Commander out of a kyloe cow will think she has come to life again and produced this steer. He is all his father, and is



BLACK-FACE SCOTCH SHEEP.