

soil and climate exert their energies (torpid enough they lie, up to the due time) until one square foot of turf presents to the careful observer from one hundred to two hundred and fifty different plants of grasses, embracing frequently 20 different species. As to the effect upon the succeeding grain crop, enough has been said to show that the creeping roots of the *trefoils* afford it far more abundant food than can be expected from the bulbous roots of Timothy-grass.

Notes on Annual Fodder Plants.

PEARL MILLET.—Of this I sowed broad cast on 27th May last about one-sixth of an acre. The soil was a dry gravelly loam, but rather rich, and I also scattered broad cast upon it 3 pecks of phosphate, which was harrowed in.

The millet was long in starting into growth, and then began to grow very feebly, so much so that barn grass and other weeds began to grow, as though they would choke it out. I therefore mowed it the end of July. It was then about 15 inches in height. About the last of September I harvested the crop. It weighed somewhat under 200 lbs. dry weight, or at the rate of about $\frac{1}{2}$ a ton to the acre,—of which not much more than half was millet.—It was mixed with hay and fed to the horses.

Now what was the cause of failure? The soil was rich enough; it was the best part of my fodder corn field. I might have supposed it to have been too dry, but for our unusual rains. The seed seemed light and lifeless. And on this account I do not consider that the Pearl millet is yet proved useless in our climate. At Como, on the Ottawa, it was tried by a friend, on rather rich, dry, gravelly soil. It averaged in height about 2 feet. The seed came from United-States, from the firm from which I bought mine.

CHINA CORN, from B. K. Bliss, is a plant of sorghum type which grows about 5 feet in height. The plant is about as leafy as ordinary corn, but its stalk is pithy and without any sweetness. It bears on top a large bunch of seed, which bends down and gives it a singular appearance: but the seed was not ripe when cut about October 10th. The plant is bulky enough to be useful, but it is, in stalk, so flavorless, and so wanting in nourishment, that its use is very doubtful.

EGYPTIAN CORN is so like the above that I could see no difference.

MINNESOTA AMBER SUGAR CANE.—Of this, I grew about one-sixth of an acre. It was planted like common corn except that 6 or 8 canes were grown in each hill. It might be planted much closer, say in drills 3 feet apart. It grew to the height of 10 feet and more. It is not leafy, but bears on top a bunch of seed, which I believe would ripen pretty well in most seasons. The stalk is sweet, in fact as sweet as a sugar stick, and full of sap; but outside of the pith is a rind, as hard as that upon the canes which our schoolmasters used so rigorously some years ago. The cane was chopped into short pieces, and eaten by the cows along with other food; but if again planting for fodder purposes I would sow as thick as oats, and mow just before the outer part of the cane hardens.

So heavy, and so full of sweet juice is this cane, that my thinly planted crop weighed 5 or 6 tons per acre.—The culture of this plant for sugar should be certainly be tried.

THEOSINTE.—This is a gigantic grass of central Asia; one plant of which is said to feed a yoke of oxen (or perhaps one or for a day. With me it had good care, but it grew only to the height of 2 feet, and was a failure, whether from want of heat or moisture I know not.

WESTERN CORN has been that on which I have mainly fed my cattle during winter, a crop which I would not forego for anything. The **SANFORD SWEET** I planted as a fodder plant 2 years ago. It gave me a smaller bulk than I expected, but it was so deliciously sweet as to be well worthy of culture.

I have also seen a Corn, a foot higher than our common yellow, and sweet both in grain and stalk; my only doubt being its sureness of ripening. This supplies a great want,—a corn heavy in growth, and so sweet in stalk, that the stalk will make good forage after it has ripened its crop. Until I find this I will stick to my old friend, Western Corn.

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SMITHFIELD CLUB—1879.

A most successful show, particularly in the Cattle classes. For the future, steers under two years old will be shown; so we shall easily see if the Shorthorns exceed all their competitors in early maturity, the grand thing after all, as much, barring such wonders as the Hereford, Leonora, as they do in rapid feeding qualities.

The improvement however most notable in the exhibition to a thoughtful mind was in the Lambs—the Hampshire-Downs, 9 months old, were laid, by thorough judges, to weigh 32 lbs. a quarter. What a contrast to the Downs of my younger days when 72 lbs. was considered a good weight for a two years old wether!

The admission of the blood-red, heavy, Sussex breed so useful an animal to the butcher, but, formerly most faultily put together—hollow behind the shoulder, and patchy all over, carrying most of its meat forward, but good along the loin, and frequently weighing from 1400 lbs. to 1600 lbs. the four quarters—has had the effect of improving in a wonderful degree the allied race of Devons.

There can be no doubt that the Sussex and Devons are one and the same thing, but the former is of a stronger and coarser strain than the latter. The Devons are now much larger, and the Sussex more refined, early maturity having been gained by selection of strains—the Sussex men have always looked well after pedigree—so that, comparing the Sussex with the three other breeds, we find that they made more meat per month than their rivals, which *ceteris paribus* is the principal thing.

The following is a table of weights, age, and monthly increase of the four breeds shown at Islington last month

Breed and No.	Average age.	Average Weight.	Monthly increase.
	yrs. mos.	cwt. qr. lb.	lb.
Devons.			
No. 7	3 2	10 3 0	—
" 9	3 3	14 2 16	29
" 6	4	16	17
Herefords.			
No. 8	2	4 $\frac{1}{2}$ 15	—
" 12	3	3 $\frac{1}{2}$ 18	31
" 4	4	1 $\frac{1}{2}$ 19 1 14	15
Shorthorns.			
No. 7	2	2 $\frac{1}{2}$ 15	—
" 15	3	1 $\frac{1}{2}$ 18 1	35
" 8	4	21	30
Sussex.			
No. 7	2	2 $\frac{1}{2}$ 13 2	—
" 6	3	1 $\frac{1}{4}$ 17 2	41
" 4	3	8 $\frac{1}{2}$ 19 3 20	40

The foregoing table needs explanation, but I will try to make it clear. Seven Devon steers averaged rather more than 2 years and 2 months apiece in age, and 10 $\frac{1}{2}$ cwt. in weight. Nine Devons, 3 years and 3 months old apiece, must, supposing them to have been as heavy as the younger class at the same age, have increased 29 lbs. apiece in weight per month, weighing now 14 cwt. 3 qr. 16 lbs. each. So the Hereford steers weighed 15 cwt. each at 2 years 4 $\frac{1}{2}$ months old, and afterwards grew 31 lbs. apiece per month, weighing