

THE SOJA BEAN AS A SUBSTITUTE FOR CLOVER.

ED. Hoard's *Dairyman*.—In your issue of April 14 I note an inquiry by T. A. W., of Mo., in regard to cow peas for winter dairy feed. Having had some experience with them, I will report what I know about peas.

A few years ago, after scoring my fifth consecutive failure on clover, I gave it up and turned to cow peas. They did not fail, but, Oh my! the memory of their harvesting makes my back ache now after four years' rest.

The vines grew from twelve to fifteen feet long. They were waist high, all in a tangle, rotted next to the ground, and when cut with a mower it took two men and a boy to part the swath before I could cut another swath.

I could have rolled up the cut swath like rag carpet for two hundred yards in a strip without a break in it.

They were so matted and lodged that it was impossible to cut them clean. Some vines, after the swath was torn apart, showed three or four feet of uncut vine straightening up towards the sun. The vines would not cure evenly. The leaves on top parched and shattered off while the vines were still green and wet underneath. There were only a few seeds on them. The soil was quite rich.

On thin soil they were somewhat more prolific and do not run to vines so badly. Horses and cattle ate them fairly well after they got used to them and I considered them a good forage crop, but not good for hay as they take too much work to cure and if a soaking rain comes, they are almost sure to rot enmasse, for it is next to impossible to tear them apart and dry them out as you can clover.

The next year I tried the medium early soy and soja beans and will not bother with either clover or cow peas any more. Instead of waiting fourteen to sixteen months for a more than uncertain clover crop, I can grow as much and better feed in four months' time. Instead of having to cut the crop inside of a week, wet or dry, to get it at its best, I can have six weeks time to suit the weather and my convenience in which to cut.

Instead of a long sprawling, matted rotting mass of vines, I have an upright growing plant holding its leaves and stem up out of the dirt, with large pulpy leaves which cure much quicker and more

thoroughly than the cow peas. They can be cut at any time for feeding, either green for soiling or hay from the time they bloom till ready to ripen for a seed crop.

Alfafa is a very uncertain crop here in Illinois and of little or no value the first year for either pasture or hay, and only grows on porous clay loam. Cow peas are good crop to grow to plow under, or pasture off, but if you try to grow them for hay you will be disappointed.

Clover yields no grain crop for feeding purposes. Cow peas on very rich soil run to vines with few seeds. On thin soil they yield better, but make less forage and hay.

Soja beans thrive on any soil. They will grow where it is too poor to grow clover, and unlike cow peas will yield all the more both of hay and seed on rich soil.

With us in central Illinois, cow peas will yield seed, 10 to 20 bushels per acre, soja beans 10 to 60 bushels. Cow peas will tear the "inards" out of a threshing machine with their long tough vines, but sojas thresh easily.

As to the comparative value of the three crops, according to the Government bulletins, clover contains when cut green, 4.4 per cent of protein or nitrogen condensed into food; cow peas contain 2.2 per cent; soja beans 4 per cent. Of fat or carbohydrates, clover has 1.1 per cent; cow peas 0.4 per cent; soja beans 1.0 per cent. If made into hay they contain respectively 12, 16, and 15 per cent protein but if the seeds are allowed to mature on the vines, they add to the latter in their composition as follows: cow peas, protein 20 per cent; fat 1.4 per cent. Soja bean seeds add $\frac{3}{4}$ per cent of protein and 17 per cent of fat.

Soja seeds are two per cent richer in protein than oil cake meal, 20 per cent richer than wheat and oats, and 24 per cent richer than corn. Of fat the sojas contain 17 per cent, linseed oil cake meal 3 to 7 per cent, corn 5 per cent, bran and middlings 4 per cent.

When siloed with green corn, the sojas make a perfect balanced ration. For calves and pigs, the beans, either green or dry, make the best possible feed, to produce health, bone and muscle.

In protein or fat they are a rich condensed food, far superior, in fact, to any of the high-priced mill products, and one you can grow anywhere and on any soil. If fed judiciously there is no danger in feeding them to any stock as a hay crop,