

But this is not all. About a week or so later, just when the lower leaves of the corn begin to turn yellow, the family are again found at work stripping the leaves from the corn stalks, not leaving a single leaf, except the one attached to the ear. At this stage the leaves are quite succulent, and make excellent food. They are thrown crosswise between the rows in the same manner as described in treating the tops, and they are also cured in the same manner.

The field is now seen as an army of bare corn-stalks, with the ears of corn projecting from the tops. There is little or no perceptible shrinkage in corn caused by the removal of the tops and leaves, and the crop is much more easily harvested than when the leaves and tops are allowed to remain. The corn is harvested late in the fall, the stalks being left standing. The farmers have implements which, when drawn over the field by teams, roll the stalks down flat and cut them into fragments. This is certainly a more sensible way of disposing of them than the ordinary manner; the whole system is an economical one, although it appears to the untutored to involve a considerable amount of labor.

Does it Pay the World to Grow Meats?

Considered merely from an economic point of view, says a writer in the Tribune, it may well be asked whether the use of flesh food is profitable to the world. That the manure made by stock will increase the fertility of the farm, may be granted only with some limitations, for the animal can, it is quite clear, give to the soil no very considerable quantity of matter which it has not first received from the earth. The dairy farms of the East have become so impoverished by continual grazing and cropping that it has been found necessary to add largely to the animal fertilizers left by the herd, to enable the dairyman to raise good calves or other animals, although great quantities of food are brought from other farms for the cattle. It is of course true that there has been a profit in the live-stock business, but that by no means shows that meat-eating pays mankind.

It may be assumed that the average production per acre of corn will be forty bushels. This, with the grass, hay, or other necessary fodder, will keep a bullock on full feed for 160 days. At that rate ninety bushels of corn, the yearly product of two and a quarter acres, will be required each year for at least two years, or the equivalent of that time and quantity, for the production of the bullock of 1,450 pounds. Such a bullock, if well grown, will yield about 800 pounds of meat, fat, and bone, or an average of 160 pounds per year per acre of nutritious food, not taking fat and bone into consideration. It will be seen that this amounts to less than half a pound per day for each acre cultivated or grazed. For this the consumer will probably pay from six to eight cents, which certainly seems to be a small price for a great deal of work.

The land required for the support of a bullock should produce 5,000 pounds per year of meat free of offal, or 10,000 pounds of food at least as nutritious as fresh beef, pound for pound; or it will in two years yield 4,500 pounds of wheat; or in a like time 6,000 pounds of oats; which will be equivalent to

thirteen and three-fourths pounds of corn, five pounds of wheat, or six and one-half pounds of oats per day. Or the two and one-half acres may be made to produce each year 30,000 pounds of potatoes, or eighty-two and one-fourth pounds of food per day. The curious might go on through the list of best-known grains, vegetables, and fruits in this way until they would cover the entire list, and find few, if any, which do not for a given amount of labor yield a much larger return in nutrition than is obtained by raising beef, pork, or mutton.

Chat about Couch Grass.

A correspondent from Strasburg, Ont., sends us a "weed" to be identified, of which we present the accompanying illustration, made from a photograph of the natural size. Quack grass, in some of its varieties, is well known in many parts of Canada, but as many of our readers are unacquainted with it, we take this opportunity of giving them warning, it being one of the most persistent plants that has ever infested a soil.

It enjoys a large number of euphonious names, amongst which may be mentioned Couch-, Quack-, Quack-, Twitch-, Quitch-, Witch-Grass, etc.; but it is known to botanists as *Triticum repens*, it is therefore closely related to the wheat plant (*Triticum vulgare*), and, according to the natural botanical classification, it is also related to chess, although the artificial school has classified the latter as *Bromus secalinus*. It will thus be seen that couch grass is excellent food for stock, and it is extensively used as such in many European countries, the roots, or rather the runners, being also used in some instances as food for man. By us, however, it is regarded as a "weed" because it is hard to kill. In our fertile imaginations, nothing is fit for food except that which is pampered half to death.

It propagates itself like the Canada thistle—both by seed and root—and the methods of treatment are for the most part identical; but it has even greater tenacity in the soil than the Canada thistle. It thrives in any soil and in any climate in which the ordinary agricultural plants grow. Unlike thistles, mustard, and other tenacious weeds, couch grass steals its way through the fields, as it were, it not being readily observed until the mischief is accomplished, except by farmers who are acquainted with its appearance and its habits of life. When once in the field, it is most effectually propagated by its subterranean runners. Like those of the thistle, the running stems are provided with numerous joints, out of which buds develop, and each of these will grow under very unfavorable circumstances, even if the runner is torn into many fragments.

No fixed rule can be given for its extermination under all circumstances. If taken in time, when a mere patch exists, quack can be exterminated with the hoe, by oft-repeated cutting beneath the surface of the ground, or

the same object will be accomplished by a heavy dressing of mulch, which will smother the weed. The work must be thoroughly done; for half-killing seems to give it double life. On a large scale, summer-fallowing is usually the promptest and most effective method, but here the farmer must exercise his judgment. Where there are many stumps, stones, roots, or fence corners, the summer-fallow cannot accomplish much, for a very small nucleus of growth will make a big spread in a short time. In such cases, a hoe-crop, especially corn, will prove the most effective. In any case, the plant should not be permitted to see daylight; for where there is no breath, there will soon be an end of life.

Sometimes it would be a matter of economy to take off one or two corn crops instead of summer-fallowing, hoeing and cultivating thoroughly and repeatedly. But this is a question of debit and credit; the extra labor incurred in cultivating and hoeing the crop (or crops) of corn may sometimes pay for a good summer-fallowing. On small patches the roots of the grass may be gathered and composted, which will facilitate the destruction, but this is impracticable on a large scale, as it involves too much labor. After the first plowing, deep cultivation is not necessary, the gang plow and the cultivator then being sufficient. It is not desirable to manure heavily while the work of destruction is going on.

If the seeds are allowed to ripen, look out for a spread the next season. If the products of the field are fed to the stock, the manure should be thoroughly fermented in order to destroy the vitality of the seeds. Many seeds will germinate even after passing through the bowels of the animal.

It is a mistake to suppose that meat is absolutely necessary during the summer months when there is so much work to be done on the farm. Of course, to leave off eating meat without making a radical change in your ration is entirely out of the question. If meat must go, potatoes must go too, for the former furnishes the nutritive elements and the latter the necessary bulk, so that foods must be substituted which go to neither extremes, that is, neither too concentrated nor too bulky. These conditions are fulfilled in fruits and vegetables in different combinations to suit the special characteristics of the individual. Animal foods need not be entirely abandoned, and they are found in a wholesome form in milk, eggs, and cheese.

Chemical analysis having pointed out that skim milk is rich in muscle-forming substances and corn rich in fat producing constituents, it was found to be correct in theory that these foods would fit well together for feeding hogs to produce pork of the first quality. Accordingly, many feeding experiments have been instituted to test the correctness of the theory, all of which have proved the economy of these foods in the production of wholesome pork. Professor Henry, of the Wisconsin Experiment Station, has conclusively proved their economic value by repeated experiments, and recommends the proportion of two pounds of corn-meal fed with three and a third pounds of skim milk. This ration contains a larger proportion of carbo-hydrates than German investigators recommend, and it is likely that, as a rule, a larger proportion of milk with less meal would produce equal, if not superior, results.



Quack Grass stem is torn into many fragments.