

In the Field of Agriculture

HORSE OR THE TRACTION ENGINE?

The United States government department of Agriculture has estimated that it costs \$75 to \$80 per year to keep a horse, and in a study of horse utility for a period covering six years, it was found that he averaged only 3.14 hours of work per day as his contribution to lessening the high cost of living.

In contrast with this it was found that he ate up the entire yield of one out of every five acres which he helped to cultivate. It has been shown, too, for every hour he worked it cost about 16 cents; whereas, a full horsepower hour can be delivered by a high-grade oil engine for only 2 cents per hour, in both cases, interest, fuel, food and depreciation being included.

Again, in plowing, a team of two horses can plow only about two acres per day. In doing this, they travel sixteen miles, which is a good day's pull for horses with a load. A small tractor, on the other hand—the kind which costs less than six horses, weighs less than six, and with a capacity doing the work of twelve—will plow fully that much in an hour or so.

It will, furthermore, plow it deeper and keep it up twenty-four hours each day until the work is completed, without feeding, resting or growing thin. While it would not be wise to dispose of brood mares and blooded stock to satisfy the foreign buyers, in the end, perhaps, the increased prices which their purchases will undoubtedly bring about will be beneficial in forcing thousands of farmers to adopt a newer and more economical form of power.

HOW TO GET GOVERNMENT LAND

Readers of The Commoner will be interested to know the amount of government land yet open to entry, its location and character, and the methods of procedure necessary to acquire it. Following is a reply to the inquiry of a reader of the Nebraska Farmer, made by the United States land office at Washington, D. C.:

"There are public lands subject to homestead entry in the states of Alabama, Arizona, Arkansas, California, Colorado, Michigan, Minnesota, Mississippi, Missouri, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Utah, Washington, Wisconsin and Wyoming.

"The approximate area of the vacant public lands in the various counties and states is given in Office Bulletin No. 335. The homestead laws and regulations thereunder are set forth in Circular No. 290. Copies of these circulars will be furnished free upon individual requests addressed to the Commissioner of the General Land Office, Washington, D. C.

"The land department does not employ locaters, and while some private parties make a business of pointing out desirable lands for a consideration, any fees which they may charge are matters between the interested parties, and this office does not exercise jurisdiction thereover.

"A person desiring to make a homestead entry should first determine in what particular locality he desires to enter land, and by consulting a state map showing the township and range lines ascertain the number

of the township and range of that particular locality. He may then ascertain of the United States land office for the district in which the land is situated, whether there are any vacant lands in particular townships. These diagrams are usually furnished by the local land offices at a cost of \$1 each, provided the pressure of business in the local office does not render the preparation thereof impracticable. The records of the various land offices are also open to public inspection for the purpose of ascertaining the location of the vacant public lands, providing such inspection does not interfere with the orderly dispatch of the public business."

PIG FEEDING EXPERIMENT

An account of an interesting experiment in pig feeding at the Kentucky state fair grounds at Louisville is related in a recent issue of Farm and Family. Five lots of pigs were placed on feed on June 17, and a month later were weighed and results noted. The final result of the test would be announced at the annual meeting of the Kentucky state fair, it was said.

The results obtained for the first month were: Lot No. 1 was composed of four pigs of the scrub type. They were fed a balanced ration of ten parts middlings, ten parts corn meal, two parts bran, one part tankage and blue grass pasture. They made a gain per day of 1.27 pounds at a cost of 5 4-10 cents per pound of gain. Lot No. 2, described as common type, fed corn in a dry lot, made a gain of .93 pounds per day at a cost of 5 6-10 cents per pound of gain. Lot No. 3, common type, fed balanced ration in dry lot, gained 1.46 pounds per day at a cost of 4 7-10 cents per pound. Lot No. 4, common type, fed corn and blue grass pasture, gained .82 pounds per day at a cost of 6 2-10 cents a pound. Lot No. 5, pure bred Berkshires, fed balanced ration and blue grass pasture, gained 1.51 pounds per day at a cost of 4 1/2 cents a pound. The Berkshires therefore made the largest gains at the cheapest cost per pound. The final result of the test will be watched for with interest by all pig raisers. So far the demonstration has proved the value of pure breeds as against scrub pigs.

THE SOY BEAN

The soy bean will thrive at least measurably well on almost any kind of soil, providing this soil has in it a liberal supply of potash, phosphoric acid and lime, says the Oklahoma Farmer. It will, however, thrive best on soils which may be termed medium in texture. Nearly all classes of soils found on the open prairie are well adapted to the growth of this plant, and the same is true of all soils that will produce good crops of Indian corn. It may be successfully grown on land too low in fertility to produce clover or cow peas. Instances are recorded in which plants have been grown in disintegrated trap rock and in coal ashes, and yet some of the light soils of the southern states may be so deficient in phosphoric acid and potash and even nitrogen as to make it worth while to apply those ingredients before planting the crop. Nor should it be planted on soils in which hardpan comes near the surface, since in such instances the root which naturally feeds deeply could not easily penetrate the

soil. Swamp lands well drained produce an abundant growth, especially of stems and leaves, hence these are specially adapted to growing soy beans for soiling food.

SUDAN GRASS

Sudan grass, which is closely related to the cultivated sorghums, is an excellent forage crop in the central great plains of North Dakota, and promises to fill a long felt want for a hay grass in the south, is the conclusion of Farmers' Bulletin, No. 605, shortly to be published by the United States department of agriculture.

Sudan grass is an annual, the leaves of which are broader and more numerous than those of Johnson grass. It is distinguished from the Johnson grass, to which it is related, by the absence of root stocks, and while this necessitates annual planting it also prevents Sudan grass from becoming an obnoxious weed like the perennial Johnson grass. When seeded broadcast or in drills, it averages about three to five feet in height and has stems a little smaller than a lead pencil. When grown in rows and cultivated, it reaches a height of six to nine feet, with rather large stems. The hay of the cultivated crop is somewhat coarser than that of the broadcast crop and is not so desirable for market hay.

Sudan grass does best on a rich loam, but it has been grown successfully on almost every class of soil from a heavy clay to a light sand. Where the soil is quite sandy, a light yield may be expected. The ground must be fairly well drained.

When given plenty of room the grass stools very freely, especially after the first cutting, and it is not uncommon to find over 100 stems arising from one crown.

RATIONS FOR SWINE

It is more desirable to make pigs grow rapidly than to get too fat, says D. O. Thompson, Perdue university. Pigs show their greatest response to a balanced ration before they reach weight of 125 pounds. Skim milk is about the best feed that can be used to supplement corn. When this is not available the following ration is very desirable: Corn, 6 parts; shorts, 4 parts, and tankage, 1 part. The corn may be fed as ear corn and the shorts and tankage fed as a thick slop.

Four successful rations for pregnant sows are: 1—Corn, 60 to 65 per cent; shorts, 30 per cent; tankage, 5 to 10 per cent. 2—Corn, 60 per cent; shorts, 30 per cent; linseed oilmeal, 10 per cent. 3—Corn, one-third; shorts, one-third; oats, one-third. 4—Corn, one-third; shorts, one-third; bran, one-third.

Both the pigs and the sow will thrive much better if given plenty of range where they may have exercise. It is very desirable to have bluegrass or rye pasture on which to let them run during the winter time.

When the pigs arrive at a weight when it becomes desirable to fatten them, a ration of corn 9 parts and tankage 1 part will be found satisfactory at the outset, and as the pigs become fatter, the proportion of tankage may be reduced to 15 parts of corn to 1 part of tankage. It is best to keep the tankage in the ration until the hogs are ready for market.

ORIGINAL ALFALFA METHOD

W. P. Givens, one of the successful alfalfa growers of Kentucky has an original method of handling his fields. He uses a spring tooth harrow with teeth much narrowed at the points immediately after each cutting. Occasionally he also uses a double cutting disk, and when he gets through cultivating his alfalfa it looks almost like a corn field prepared for planting.

KEEPING RECORDS OF DAIRY COWS

In no other business except farming has general success been attained without the use of business methods, such as keeping records of the various transactions. With the increasing cost of farm operations and keener competition in selling, success under these conditions is becoming less and less certain. Careful attention to details is essential to success in dairying, and as a result the most successful dairy farmers are keeping records of the individual cows.

The use of the Babcock test and scales enables the farmer to keep on accurate account of what each cow is producing, thus making it possible for him to weed out his poor cows intelligently and build up a good producing herd. The method is simple, easy to understand, and requires but little labor. For keeping these records, the following articles will be needed: Scales, milk sheets, Babcock testing outfit, and blank books for permanent records of each cow.—Extension Bulletin No. 25, Nebraska College of Agriculture.

FALL HATCHED CHICKS

Forty cents a pound for chicken—not capon—roasters sounds attractive to the seller, writes B. F. W. Thorpe in Farm and Fireside. A few are getting this fancy figure, and more can do so. The fortunate ones do it this way.

Chicks are hatched in October or thereabouts and raised in comfortable quarters where they can be kept healthy and busy scratching in dry litter in the sunshine and still be protected from draft and storms at all times.

These birds of the larger breeds are kept growing steadily till May, when they are crate fattened for two



1720 Colorado
Boulevard
Denver, Colo.

PATENTS Watson E. Coleman,
Patent Lawyer, Washington,
D.C. Advice and books free.
Rates reasonable. Highest references. Best services.

GOVERNMENT SALE of Indian Timber Lands
There will be offered at public auction at the places and times herein named at not less than the appraised value, about 967,000 acres of timber lands with standing timber thereon, which includes about 841,347,000 feet of pine, as estimated in 1911, and approximately 14,275,000 feet of hardwood, located in the Choctaw Nation, southeastern Oklahoma. The sale of the lands in Pittsburg County will be held at McAllister, November 3; in Latimer County at Wilburton, November 4 and 5; in LeFlore County, at Poteau, November 6 and 7; and in Pushmataha and McCurtain Counties, at Hugo, November 9, 10, 11 and 12, 1914. Bids may be submitted in person or by agent with power of attorney, or by mail. Land and timber will be sold together. Land will be offered in tracts not exceeding 160 acres. One person can only purchase one-quarter section of agricultural land, but is not limited as to the number of acres of non-agricultural land. Terms, 25 per cent cash, balance in three annual installments of 25 per cent each, with interest at 6 per cent, but payments may be completed any time. Immediate possession given after approval of sale. Residence on land not required. Removal of portions of timber permitted as paid for. Improvements on land, consisting of a few scattered houses, will be appraised and sold with the land and the owners reimbursed where they are not the successful bidders. The right to waive technical defects in advertisements and bids, and to reject any and all bids, is reserved. Detailed information, including descriptive lists showing the quantity and the appraisement of timber and land in each tract, will be furnished without cost. Maps showing location and accessibility to railroads of each tract, will be furnished at a cost of 50 cents each. Application for both descriptive lists and maps should be made to the Commissioner to the Five Civilized Tribes, Muskogee, Oklahoma. Remittances for maps should be made payable to George N. Wise, Disbursing Agent, Muskogee, Oklahoma. CATO SELLS, Commissioner of Indian Affairs.