

What Will Power do on my Farm

Kerosene engine pumping water to tank. Engine is usually at well head. Many uses for this attractive form of farm power.

Farmers Work Less Who Make Machinery Work More Here is Proof that Wider Machinery and More Power Pay

The following data is the summarized experience of 1852 farmers who kept accurate records. Hours in field averaged, daily, 9.65.

Ploughing: Two-horse teams drawing 10, 12 and 14-inch ploughs, turned over 1.60, 1.70 and 1.80 acres respectively. Three-horse teams drawing 12 and 14-inch bottoms ploughed 2.10 and 2.30 acres, respectively, in the same length of time. Four-horse gangs turning 24 and 28-inch widths accounted for 4.00 and 4.25 acres, respectively. Man-power is the scarcest and dearest form of farm power at present. More horses, or tractors, and wider furrows will do much to tide us over this abnormal year.

Harrowing: The relative costs of this important operation were as follows: small disc harrow, 90 cents an acre; three-horse disc, 70 cents; wide, double, cut-away disc harrow, 45 cents. Two sets of narrow drag harrows, hitched together behind four horses, save a man's labor.

Seeding: It was found that an average of 3 feet of drill should be allotted to each horse, and that 4 acres a day could be accounted for. Four horses on a 12-foot drill, therefore, would make a profitable combination by lowering the hours of man-power required in seeding.

Harvesting: The same principle holds good here, too. With the exception of the side draft and addition to the length of cutting rod and table does not add materially to the load. Each horse on the machine will cut about four acres. Ample horse-power in harvest pays well.

New Machinery is not required to apply this principle of more power to a profitable extent. The practical farmer shown in our illustration is replacing man-power by the most efficient use of the machinery he already owns.

More horse power permits the use of two implements at one time. Assaving in man power.

Mechanical Power can still further assist in economizing Man Power.

Motors can be made to do much of the work formerly done by man or horse. Where electricity is not obtainable the gasoline engine can be used to run a dynamo to provide electricity for lighting purposes. Where there is a good-sized stream on the farm it is often possible to dam it and obtain fall enough to generate all the power needed for stationary purposes, including running dynamo to provide electric lights and power.

There are two chief advantages in introducing motor power to supplant man-power. The work can be done much more quickly and much more cheaply. These same considerations also

apply to the supplementing of the horse by the motor, in many operations, particularly for stationary purposes and marketing. This is also becoming true of field work since the advent of the light tractor.

Grinding at Home Saves Time

With gasoline at 40 cents per gallon, grain can be ground at 4 cents per 100 pounds. At 20 cents per gallon the cost would be 2 cents per 100 pounds, which represents the cost if the engine burns coal oil at 20 cents per gallon. A farmer buying a gasoline engine should investigate the ones that will burn coal oil if desired.

The farmer should make a special study of the gasoline engine so as to be able to get the most out of it. An improperly adjusted carburetor may easily burn twice the fuel really necessary to do a given amount of work. And when the mixture is too rich, carbon deposits in the cylinders more quickly than with a correct mixture, thus still further reducing the efficiency of the engine. If a farmer uses 1 horse-power 1 hour a day on the average, this can be provided by the gasoline engine at 5 cents per day or \$18.25 per year when gasoline is worth 40 cents per gallon, or at \$9.12 per year by coal oil at 20 cents per gallon.

With electricity at 4 cents per kilowatt-hour the cost of grinding 100 pounds of grain would be 1.88 cents, and 1 horse-power 1 hour a day would cost 3 cents per day or \$10.95 a year.

With electricity at 4 cents per kilowatt-hour the power for all this work will cost only about \$65. Any overhead charge for transmission line must be added. With gasoline at 40 cents per gallon the gasoline engine will do the same work at about \$110, and the oil engine burning coal oil at about \$55.00, assuming the latter to cost half as much as gasoline.

For full information regarding the efficiency, management, installation or troubles of any practical farm machinery, write the Office of the Commissioner, Ontario Department of Agriculture, Parliament Buildings, Toronto.

What 3 Horse-Power used one hour a day will do on the average farm:

Grinding Grain.—20 days of 10 hours each using 3 h.-p., or 10 days using 6 h.-p.

Pumping Water.—½ hour every day, using 1 h.-p.

Cutting Straw.—3 days of 10 hours each, using 3 h.-p.

Pulping Roots.—½ h.-p. 1 hour per day for 6 months.

Sawing Wood.—1 day of 10 hours, using 3 h.-p.

Milking Machine.—2 hours every day, using 1½ h.-p.

Separating.—1/6 h.-p. 1½ hours every day.

Churning.—1/6 h.-p. 1½ hours per week.

Ontario Department of Agriculture

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The Farm tractor is doing splendid work in the rapid cultivation of the soil.

