



Answers to questions about structures, ventilation, soil, water, waste, energy, machinery and safety.

Computing motor operation costs

In trying to shave farm energy costs, it's good to know what your electric motor costs are relative to the total utility bill.

Table 1 below shows the energy costs associated with operating single-phase motors. To calculate electricity consumed, multiply the running kilowatts by your cost per kilowatt-hour for the horsepower motor you have. For example, a 2 HP motor running 3 hours per day on \$.11 per kilowatt-hour electricity would cost 66 cents per day (2 KW x 3 hr x \$.11/KW-hr = \$0.66).

As a quick guide to make calculations simple, allot 1 kilowatt per horsepower of motor capacity. The starting kilowatts is important to know when figuring loads to be started by standby generators.

Table 1. Single Phase Motor Operating Costs

Motor Horsepower	<u>Starting KiloWatts</u>	<u>Running KiloWatts</u>
1/4	1.5	0.3
1/3	2.0	0.4
1/2	2.3	0.575
3/4	3.35	0.835
1	4.0	1.0
1 1/2	5.0	1.5
2	7.5	2.0
3	11.0	3.0
5	15.0	4.0
7 1/2	21.0	7.0