

Load Management Helps Flood Irrigators



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Load management (LM) is an incentive program that a couple of electric coops in the Bootheel area make available to irrigators. If irrigators agree to withhold from running pumps during the heat of the day, these utility companies will lower the rate they charge them. The reduction in costs

paying if he used D/S instead. His cost per KWH is about 12 cents. However, the flood irrigator not using LM is very likely paying more per acre than he would be if he were using D/S! His cost per KWH is 30 to 40 cents if his field size is 80 acres or less.

How much savings can a flood irrigator incur from using load management? Figure 1 shows the savings in dollars per acre based on the field size being irrigated and the flow rate of the pump. For example, if a 60-acre field is being irrigated with a pump making 2,200 GPM the LM option would reduce the per-acre costs for those

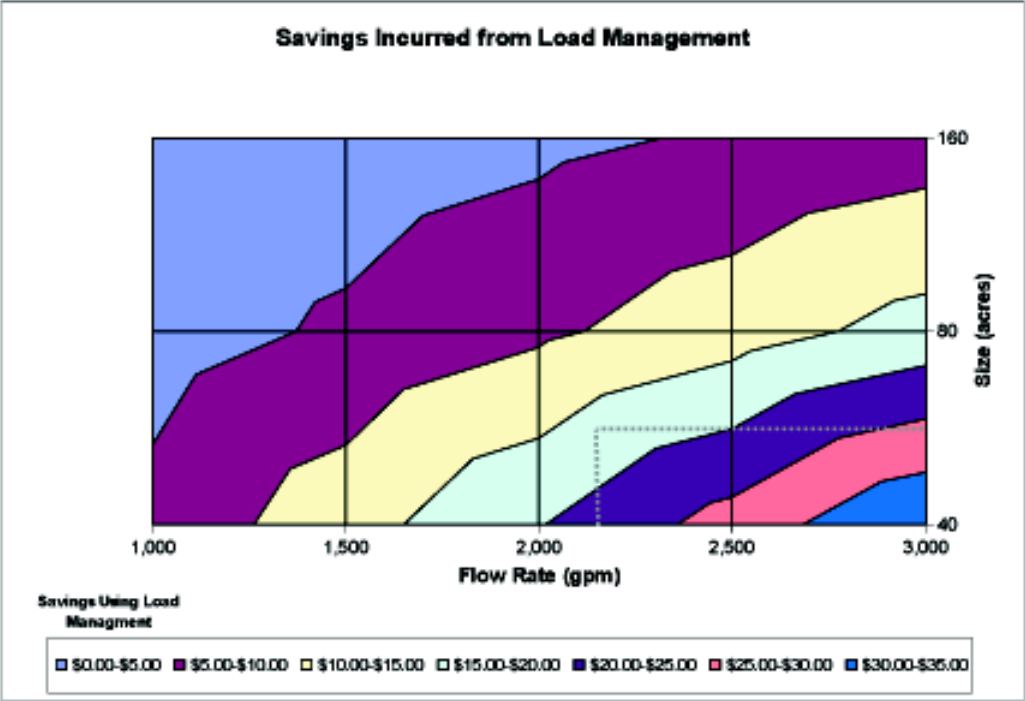


Fig. 1. The per-acre savings from using load management programs based on field size being irrigated and flow rate. An example is shown where a 60-acre field with a pump making 2,200 GPM will have a savings of \$15 to \$20 per acre by using load management.

comes about by the companies foregoing the demand or stand-by charge. There can be very large saving for irrigators who choose LM.

The normal Bootheel pivot operator (135 acres, 35 PSI operating pressure, and 11 inches pumped) using electricity pays about 40 percent of what he would be paying if he were using diesel or propane (D/S) instead. Load management might save him some money, but in some scenarios, it could actually increase the cost a bit. The take-home fact is that electricity always makes sense for the pivot user, although the benefits of LM must be looked at on a case-by-case basis. The cost per KWH for the pivot operator is about 9 to 11 cents.

However, the case for flood irrigators is more complicated. The overall cost for flood irrigation is influenced by flow rate (thus pump motor size) and the number of acres being irrigated (thus annual hours of operation). As pump size increases and/or field size decreases, the pumping cost per acre for the flood irrigator using electricity increases. However, using LM keeps this from happening.

The flood irrigator on load management is paying about 50 percent of what he would be

60 acres by \$15 to \$20 for each acre.

The SEMO Electric Coop and the Ozark Border Coop have these load management programs. They discount the charge to farmers by dropping the demand charge. Flood irrigators who benefit the most have large pumps and smaller acreages.

The Pemiscot-Dunklin Electric Coop does not currently have a load management program. However, their stand-by rate is low, resulting in the final charge for flood irrigators being very close to what the other two utilities offer with their load management programs.

If you are flood irrigator and have balked at using LM since shutting off power means you have to re-wet the top part of your field, think about it as a form of surge flow. Once a furrow is wet and slicked over the water stream moves out fairly fast. I've timed one to reach the bottom of a quarter mile field in just 20 minutes. This is a small cost compared to the savings you can obtain from load management. Δ

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