

greater than that of the HH system because of greater labor requirements for the CT system, and despite a lower TDH for the CT system.

Total System Costs: Total costs (fixed and operating) for the four irrigation systems analyzed are shown in both Table 1 and Figure 1. Center pivot costs ranged from \$62 to \$71 per acre, while traveling gun costs ranged from \$94 to \$107 per acre. Center pivot total costs were less than traveling gun total costs because of both lower fixed and lower operating costs. The HH total cost was greater than the CT total cost because of the greater fixed cost of the HH system.

Analysis of Individual Systems

Irrigators can easily compute their own costs by substituting their individual component costs into the tables given in Appendices A-D. Then, by dividing by the straight line depreciation factor and substituting individual interest rates, costs may be computed by each grower. Price estimates in this manuscript are presented to demonstrate a technique and price trends. They will deviate with individual designs and field situations.

Price estimates of components and depreciation schedules are also listed in Appendices A-D. It should be realized that present marketing and sales situations, as well as many other factors, will change these figures for individual systems purchased.

Irrigation Break-Even Returns

Yield increases required to recover irrigation costs (break-even) are given in Tables 2 and 3. Table 2 lists break-even yields for corn, while Table 3 lists break-even yields for soybean production. These tables can be used as guides to determine the yield increases required to pay for an irrigation system and the economics of whether or not to purchase an irrigation system.

In both Tables 2 and 3, the break-even yield depends upon the commodity selling price. The required yields for each of the four system types are given in the body of the tables. Yields were computed based upon the commodity value, and the irrigation costs computed in Table 1 were used to compute the yield increase required. Additional production costs, such as additional fertilizer, seed, chemigation, or other costs may be incurred and may further increase the yield required to break even.