

Mechanized Conversion



Buyer's Guide



Make Your Own Decision

Look at the manufacturer's reputation

Over the past 30 years, more than two dozen mechanized irrigation manufacturers have gone out of business. In addition, the more mechanized irrigation equipment owners you talk with, the more you will learn about which companies can be trusted to perform as promised—day after day, year after year.

Ask about the parts and service support

No matter how good the design, engineering and manufacturing quality, all equipment eventually needs parts and service. The inventory of the most needed parts carried by the local dealer is an important factor. Also, determine whether the manufacturer has a nationwide system of parts depots that can provide what you need within 24 hours. If your system needs repair at a crucial time in the life span of your crop, delays can cost thousands.



Before you purchase any mechanized irrigation equipment, we encourage you to review the preceding information carefully. Also, talk to other growers, as well as to your nearest Valley® Dealer. You'll see why buying mechanized irrigation from Valley is an excellent investment in your bottom line, your quality of life and in the land and resources that will be here for generations to come. Visit www.valmont.com/irrigation/ for more information about the impact of conversion on your operation. You can also find specifics on Valley mechanized irrigation equipment and even contact the Valley Dealer nearest you.

Talk with your dealer

No two mechanized irrigation dealers are identical. Although most offer the same types of services, it's a good idea to talk to other farmers before selecting one. You'll quickly learn which dealers they trust to respond quickly to service problems, and which dealers they count on to keep them up and running.

Decide what is the best long-term value

Center pivot, corner or linear irrigation equipment can be a major investment. Look past a low initial price and consider the total costs to install and operate it over 10 or 15 years. In most cases, investing a little more up front for improved quality will pay big dividends in the long run.





Since man first planted seeds in order to raise food for his family, water has been the primary differentiating factor in any crop's success. Not long after that first field was planted, innovative farmers figured out a way to bring water to thirsty plants.

Up until the advent of mechanized irrigation, the only way to irrigate a field was to dig a ditch alongside the field and bring the water into the field through gates or pipes, allowing the water to run down the field until it was saturated. But times and farming practices have changed. Fresh, clean water, which was once so plentiful, is becoming scarce. Many states and water districts have put in place, or are planning, comprehensive restrictions on the amount of water that can be used for irrigation. Pending water restrictions are based on science, as well as a growing respect for earth's most precious finite resource. Farmers all over the world are converting their traditional farming practices to mechanized irrigation, and in the process answering agriculture's greatest challenge: **how to produce more with less water.**

Reduce Tillage and Increase the Bottom Line

With flood irrigation, multiple equipment passes are usually needed to clean the field and bury debris so water can flow from one end of the field to the other. And yet the water application is far from uniform. With mechanized irrigation, however, several tillage options are possible. Farmers can employ ridge-till, mulch-till or no-till farming, whatever works best for their particular operation, and save the costs associated with increased tillage.

Plus, in many regions, government soil conservation guidelines require that you maintain a specific amount of cover in the field to minimize erosion. By reducing the need for tillage, mechanized irrigation conserves your soil and ensures compliance with government regulations.

In the areas of conservation compliance and crop residue management, mechanized irrigation can make a big difference. For example, a center pivot minimizes soil compaction and follows wise conservation practice. Considering that you live on the land, it simply makes good sense to keep the long-term best interests of the earth in mind.

Prevent Water Contamination

For years, ag professionals have known that leaching and runoff are inescapable consequences of flood irrigation. Making the switch to mechanized irrigation helps address these problems, with uniform application patterns that decrease the leaching of nitrogen and other chemicals significantly. Mechanized also reduces soil and chemical runoff, which can eventually move into freshwater sources, because less water is used more efficiently.



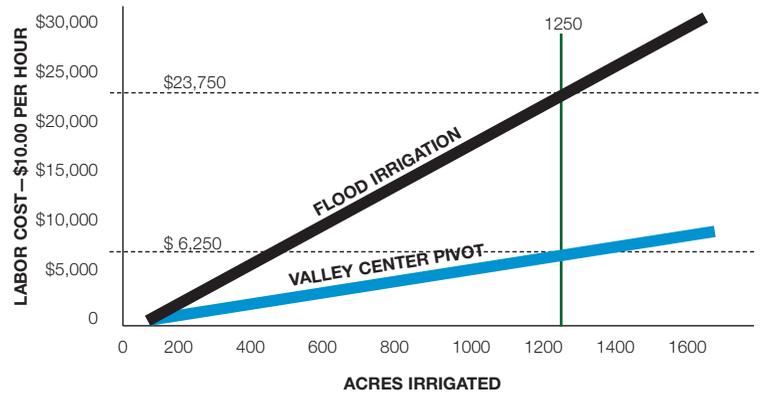
Today, an increasing number of federal laws govern the application of crop protection chemicals. Mechanized irrigation systems in use today make the application process much more accurate and specific—and help you stay in compliance.

Proven Performance

Uniform Yields, Year After Year

Hundreds of studies have proven beyond any doubt that irrigation increases yields. Those same studies also show that mechanized irrigation is dramatically superior to traditional flood irrigation methods at generating high yields, year after year. Simply, the entire crop receives the proper amount of water, at the proper time. Nutrients and chemicals are not washed off with the topsoil or leached through to the groundwater. Water-soluble pesticides or herbicides are applied with greater precision, without waiting and hoping for the right amount of rain. And farmers are able to continue making a living from the land they and their families have worked and lived on for generations.

Labor Cost Per Year/Per Acre



*1250 acres = approximately 10 Center Pivots

Save up to 75% in Labor

Moving gated pipe, siphon tubes and opening gates is hard, time-consuming work. And when the people doing the work are hired hands, it's also very expensive. But flood irrigation really boils down to a quality of life issue—for you and for your family. With today's computerized controls, one person can run multiple pivots, covering thousands of acres. Instead of hours and hours of hard work to irrigate a field, it's done in a few seconds with the push of a few buttons.

Labor Requirements Per Year/Per Acre

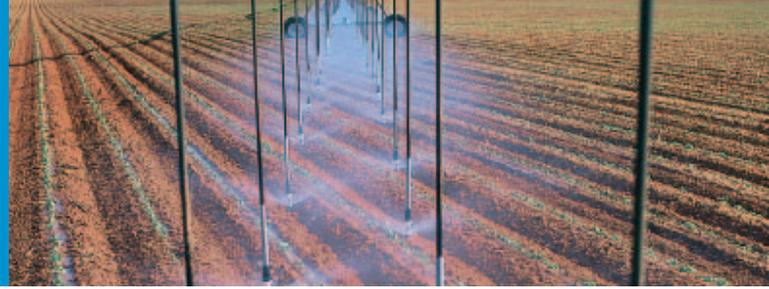


Labor requirements and cost charts are based on a University of Nebraska study, "Comparison of Irrigation Distribution Systems."

Water usage, pumping costs and chemigation cost analysis are based on findings from a study conducted by Servi-Tech Incorporated, the largest crop consulting organization in the United States.

The information in this Mechanized Conversion Buyer's Guide is intended for use as a guide and does not constitute a guarantee or warranty that specific yields or income can be achieved. The actual results are impacted by: soil and water characteristics, weed and insect control, fertility, climactic conditions, farming and management practices including irrigation techniques and marketing strategies. Other factors may also affect the end results.





Decrease Water Usage Over 50%

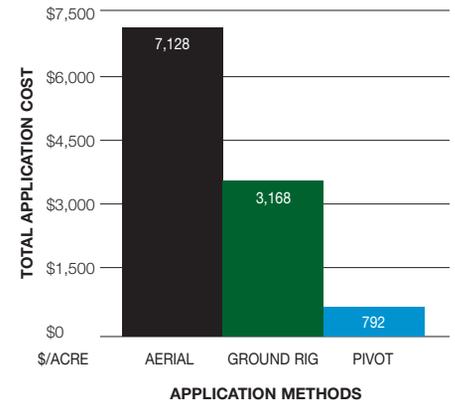
Mechanized irrigation equipment uses much less water than traditional flood methods. In fact, depending on the situation, crop and field configuration, studies have shown that mechanized irrigation can use up to 65 percent less water than siphon tubes, gated pipe or any other manual method. This will become critically important as tighter water use regulations are imposed.

Save Thousands on Chemigation

Big and small operations across the country can see substantial savings when chemicals are applied through center pivots instead of via traditional methods such as ground rigs, which can result in crop loss, and aerial sprays, which can be expensive. This is especially true in the case of crops that require numerous applications in the course of a season.

Chemical Application Costs*

*(Based on 132 acres and 12 applications) *Does not include the cost of chemicals.*



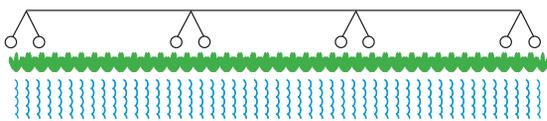
Total Water Usage / Water Savings

EXAMPLE	1 Year	20 Years
Gravity/flood system 1,100 Gallons x 60 Minutes x 1800 Hours (75 Days) = Minute Hour	118.8 Million Gallons	2.4 Billion Gallons
Center Pivot 750 Gallons x 60 Minutes x 1200 Hours (50 Days) = Minute Hour	54.0 Million Gallons	1.1 Billion Gallons
Water Savings =	64.8 Million Gallons	1.3 Billion Gallons

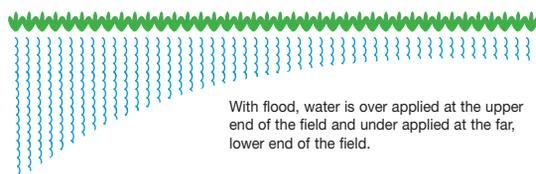
Flood irrigation methods apply far more water than crops need. By this example, flood irrigation done over 20 years on a quarter-section of ground uses 2.4 billion gallons of water.

Mechanized irrigation has the potential to use less than half that. Converting this field would result in a water savings over 20 years equal to 1.3 billion gallons. That's a significant amount of one of the world's few finite natural resources. Being a wise steward of water can pay off with positive impact in the field, too. Overwatering can cause leaching of nitrogen and water runoff. Irrigation also makes it easier to manage poor quality water because the equipment can apply water with high soluble salt. The pivot applies a uniform application of water across the entire field, thus making it easier to control salt accumulation in the root zone vs. flood irrigation.

Center Pivot or Linear Irrigated Field



With a mechanized irrigation system a precise application of water is achieved and evenly distributed.



With flood, water is over applied at the upper end of the field and under applied at the far, lower end of the field.

Save Over 50% in Pumping Costs

It follows logically that if you are using less water, you will naturally have lower pumping costs. The center pivot will use far less diesel fuel and far less electricity to irrigate the same amount of land.

	1 Year	20 Years
Electricity Cost - Flood $(1,800 \text{ hours/year}) \times (128 \text{ HP}) \times (\$0.07/\text{kilowatt-HR}) =$ 1.18 HP-HR/kilowatt-hour	\$13,667.80	\$273,356.00
Electricity Cost - Pivot $(1,200 \text{ hours/year}) \times (90 \text{ HP}^{**}) \times (\$0.07/\text{kilowatt-HR}) =$ 1.18 HP-HR/kilowatt-hour	\$6,406.78	\$128,135.60
Savings	\$7,261.02	\$145,220.40
	1 Year	20 Years
Diesel Fuel Cost - Flood $(1,800 \text{ hours/year}) \times (128 \text{ HP}) \times (\$1.00/\text{gallon}) =$ 16.7 HP-HR/gallon	\$13,796.41	\$275,928.20
Diesel Fuel Cost - Pivot $(1,200 \text{ hours/year}) \times (90 \text{ HP}) \times (\$1.00/\text{gallon}) =$ 16.7 HP-HR/gallon	\$6,467.07	\$129,341.40
Savings	\$7,329.34	\$146,586.80

* 128 HP based on 1100 GPM, 300ft. of lift, 20 PSI discharge pressure, and 75% pump efficiency.
** 90 HP based on 750 GPM, 300ft. of lift, 25 PSI discharge pressure, and 75% pump efficiency.



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See your local authorized Valley Dealer:

Valmont® Irrigation has a policy of continuous product improvement and development. As a result, certain changes in standard equipment, options, price, etc., may have occurred after the publication of this catalog. Some photographs and specifications may not be identical to current production. Your local Valley® dealer is your best source for up-to-date information. Valmont Irrigation reserves the right to change product design and specification at any time without incurring obligations.

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