VALLEY Circles for Rice

Rice Production

RELIABLE

DURABLE

PRECISE

ADVANCED

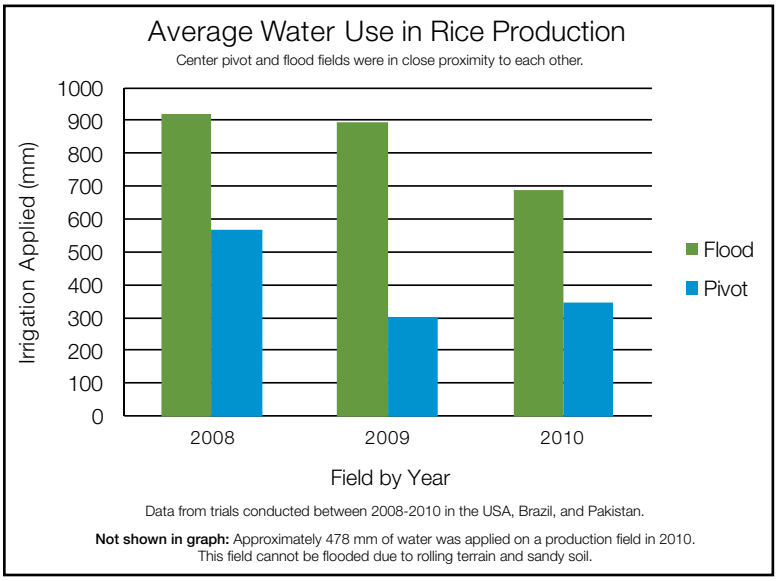
RESPONSIVE

Changing the face of the earth to feed the world.

As the demand for water increases across the globe, rice producers are beginning to question traditional irrigation methods, and face an uncertain future with a limited number of alternatives. The competition for the earth's most precious resource, along with the world's ever-growing population, has led to the process of growing rice under center pivot and linear machines.

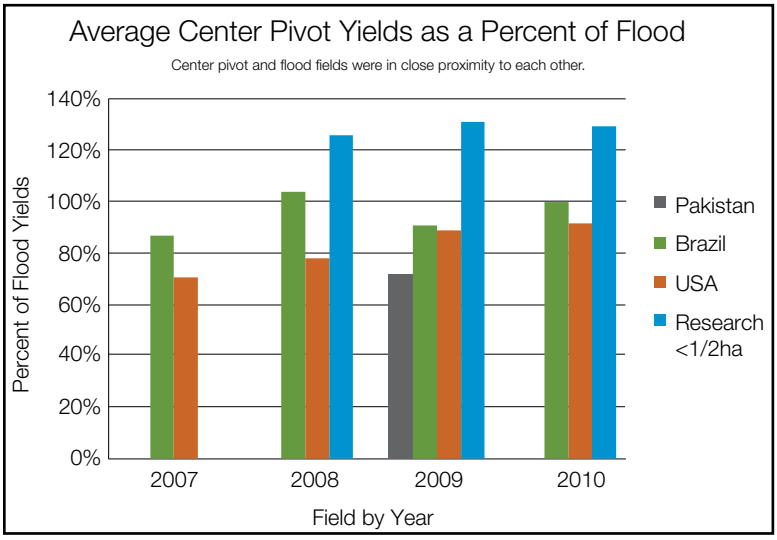
Center pivot and linear irrigation machines are designed to precisely irrigate a grower's field. Center pivots irrigate in a circular pattern while linears travel back and forth across a field in a straight line.

With traditional flood irrigation methods, rice must be grown on a flat or nearly flat field with specific soil characteristics; these fields often require extensive levelling or complex borders. However, with center pivot and linear irrigation, rice can be produced in areas that were never before possible. Because center pivots and linears can irrigate rice on most types of terrain and soils, more land can be put into rice production, increasing the amount of food produced and giving growers another crop for their operation!

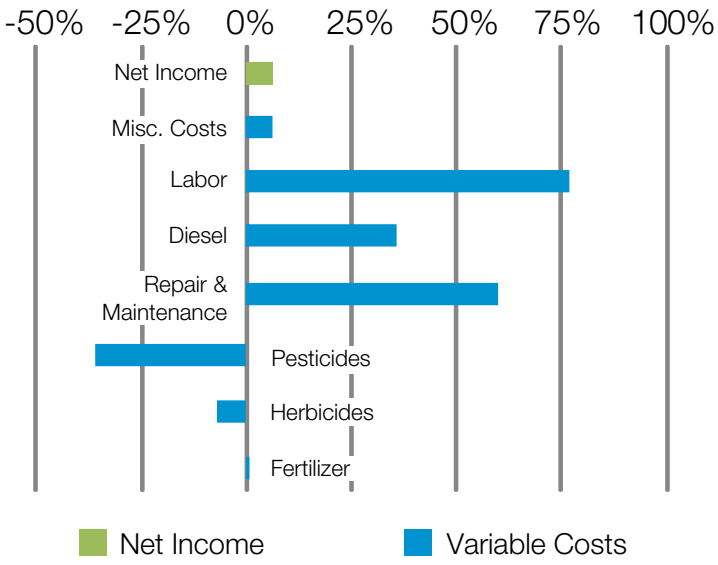


Data from trials conducted between 2008-2010 in the USA, Brazil, and Pakistan.

Not shown in graph: Approximately 478 mm of water was applied on a production field in 2010. This field cannot be flooded due to rolling terrain and sandy soil.



Average Cost Savings When Producing Rice with a Center Pivot



Values illustrate the percentage difference between flood and center pivot irrigation costs.

Net Income - 5% more profitable

Misc. Costs - 5% savings

Labor - 76% savings

Diesel - 34% savings

Repair and Maintenance - 63% savings

Fungicides and Insecticides- 37% increase in spending

Herbicides - 7% increase in spending

Fertilizer - no cost difference

Center pivot data from trials conducted in 2010 in the USA. Flood data from the Univeristy of Arkansas. Archie Flanders, et al. 2010 Crop Enterprise Budgets. December 2009.

Irrigation. Technology. Conservation.

What are the benefits to growing rice with center pivots and linears?

Benefits to Traditional Rice Growers

- No need for precision levelling or contour levees
- Reduce water use by only applying water when needed
- Dry fields lead to easy and clean harvest
- Ability to precisely apply chemicals and fertilizers through the center pivot or linear
- Increased profit potential versus flooded rice

Benefits to Non-Traditional Rice Growers

- Minimal field preparation
- No need for expensive aerial applications of fertilizers or chemicals
- Ability to grow rice on land not suitable for traditional flood irrigation
- Rice can be added to the crop rotation
- More profit potential than other crops

Benefits to Society

- Center pivot and linear irrigation allow for minimum tillage, which benefits the soil
- Fewer greenhouse gas emissions have been observed
- Water conservation
- Reduced leaching of fertilizers and chemicals
- More food produced using fewer resources

The Leader in Producing Rice with Center Pivots and Linears

Valley Irrigation was the first center pivot company to extensively research and document a management system to produce rice under center pivots and linears. This patented process includes five major guidelines to help growers maximize yield, increase profitability, and reduce overall costs.

The process includes:

- Seed characteristics
- Chemical/fertilizer applications through the center pivot or linear
- Irrigation scheduling
- Solutions to minimize wheel tracks
- Water application packages

The process of growing rice with center pivots, linears, and corner machines is patented by Valley Irrigation.

Circles for Rice Global Presence

Valley Irrigation has been conducting commercial research on rice production under center pivot and linear machines since 2008. Both research and field trials have been, and continue to be, conducted in an effort to conserve resources and farm inputs, increase grower profitability, and produce more food for the world's growing population.

U.S.A.	2009 - 2012
Production Sites	20
Research Sites	6
South America	
Production Sites	12
Research Sites	8
Africa	
Production Sites	2
Research Sites	2
Middle East	
Production Sites	7
Research Sites	1
C.I.S.	
Production Sites	2
Research Sites	1
China	
Production Sites	2
Research Sites	1

Research sites were monitored by one of many *Circles for Rice* partners: RiceTec, the University of Missouri Delta Research Center, the University of Arkansas, Texas A&M University, Embrapa, and Irga.

Weekly field updates!

Rice in the media!

Upcoming events!

Blog

www.ValleyIrrigationBlog.com

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