Shared Center Pivots
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University Council of Water Resources Conference
2014 June 18-20, 2014
Tufts University, Medford, MA
Population growth in Africa (2010-2050)

Source: United Nations
Economic water scarcity in Africa

IWMI, 2000
Rainfall is variable in Africa
Rainfall variability and GDP growth in Ethiopia

Agricultural GDP growth

Rainfall variability and GDP growth in Kenya

World Bank 2007, Kenya Adaptation to Climate Change in Arid and Semi-Arid Lands (KACCAL)
Blue water or Green water

Rainfall or water withdrawals
Extensive or intensive production
Biohomogeneity or biodiversity
Irrigation options

Type: Surface
   Drip
   Sprinklers
   Center Pivots

Scale: Household systems
       Community schemes
       Large schemes
Center Pivots

In the US we would like high yields even in the face of major shocks, and that our agricultural practices will have acceptable environmental impacts. Shared Center Pivots can offer the same promise to African smallholders.
A center pivot is a machine. Africans can choose:

- Local varieties or GMOs
- Organic or industrial farming practices
- Ownership by local communities or land grabbing elites
A shared center pivot is a center pivot that is operated by a community of farmers for their shared benefit.
Center pivots are made larger by adding spans

Adding additional spans will increase the area covered by the pivot.

Valmont Industries Inc.
Cost per hectare (USD)

Irrigated area (ha)

Valmont Industries Inc.
Advantages of Shared Center Pivots

Lower capital costs
Lower impact on the landscape
Controlled water delivery
Equitable water delivery
Resilience
Potential for multiple use
Shared Center Pivots require:

- Recurrent expenditures
- Reliable energy supplies
- Competent operation and maintenance
- Timely parts availability
- Timely repairs
Requirements beyond direct community control:

- Reliable market access
- Reliable market information
- Reliable supply chains
- Sustainably managed water resources
The ability of the farmers to organize themselves under the pivot will determine the success or failure of their enterprise.

Governance
Finances
Ownership
Land tenure
Labor
Marketing
“He who feeds you, controls you.” “Where is imperialism?” Look at your plates when you eat. These imported grains of rice, corn, and millet - that is imperialism.” Thomas Sankara

Thank you