

Maximizing The Efficiency of Flood Irrigation

Efficiency

- Irrigation Efficiency
- Application Efficiency

Efficiency

- Uniform application of an adequate volume

Factors Affecting Efficiency

- Crop
- Soil Texture
- Slope
- Field Geometry
- Volume of Water Available
- Method of Water Transport

Crop

- Timing of application
- Volume of water required
- Depth of application required

Soil Texture

- Infiltration differences
- Advance rates
- Deep percolation losses
- Roughness

Slope

- Graded vs. Level
- Uniformity
- Surface irregularities
- Land leveling

Field Geometry

- Uniformity of Dimension
- Row Length

Volume of Water Available

- Furrow stream
- Rows per set
- Border width

Method of Water Transport

- Open ditch
- Lined Ditch
- Pipelines
- Gated Pipe / Polypipe

Conclusions

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- Biggest obstacle to efficient application is time
- Faster we can cross the field the more efficient we will be