

Irrigation Methods

BASIN (SURFACE)



Slope	Flat lands with slope 0.1% or less
Soil	All Soils (except coarse sand of infiltration greater than 30mm/hr)
Crop	Paddy (rice), Citrus trees, Banana
Labour	Higher labour input
Water Quality	Preferred if the irrigation water contains much sediment
Efficiency	60%

**Issues/
Concerns**

Bund erosion; Basin Leveling; De-weeding and desilting of field channels; Under irrigation; Over irrigation;

BORDER (SURFACE)

Slope	Slope up to 2% on sandy soil Slope up to 5% on clay soil
Soil	All Soils (except coarse sand of infiltration greater than 30mm/hr)
Crop	Close growing crops
Labour	Higher labour input
Water Quality	Preferred if the irrigation water contains much sediment
Efficiency	60%
Issues/	Maintenance of borders; De-weeding; Sloping borders to guide water downstream;

Concerns

FURROW (SURFACE)



Slope	Mild Slope up to 0.5% to avoid soil erosion Minimum slope of 0.05% for drainage
Soil	All Soils (except coarse sand of infiltration greater than 30mm/hr)
Crop	Row Crops, Maize, Sunflower, Sugarcane, Soyabean, Vegetables, Wheat
Labour	Higher labour input
Water Quality	Preferred if the irrigation water contains much sediment
Efficiency	60%

**Issues/
Concerns**

Dry downstream ends of furrows; Weeding and silting of field channels; Weeding and silting of drains; Dry spots, Water ponding;

SPRINKLER**Slope**

On steeper or unevenly sloping lands

Soil

(Adaptable to most soils including coarse sand of infiltration greater than 30mm/hr)

Crop

High value cash crops, fruits, vegetables.

Labour

Require little land leveling, less labour intensive

**Water
Quality**

Efficient in leaching out salts

Efficiency

75%

**Issues/
Concerns**

Strong wind can disturb the spraying of water from sprinklers; High capital investment per hectare; Large sprinklers not recommended for delicate crops like lettuce; Right operating pressure recommended by the manufacturer;

DRIP



Slope	On steeper or unevenly sloping lands
Soil	(Adaptable to most soils including coarse sand of infiltration greater than 30mm/hr)
Crop	Individual plants or trees or row crops such as vegetables, fruits and sugarcane, high value cash crops.
Labour	Require little land leveling, less labour intensive
Water Quality	If irrigation water contains dissolved salts, as less water is used
Efficiency	90%
Issues/ Concerns	High capital investment per hectare; Blockage of the emitters; Pipes exposed to direct solar radiation;

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Appraisal & Monitoring