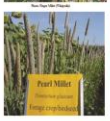
3.Drought resistant Crops and Seeds

Plant crops which are more tolerant to drought like *finger millet, pearl millet,Guinea millet,cowpea,lentils, amaranth, various sorghums, African rice, Ethiopian oats, irregular barley, mung beans and many grasses.*



• Drought tolerant crop seeds are available both through biotechnology and from native seed varieties.

1. Zai planting pits are hand-dug holes about ten inches wide, ten inches deep, and three feet apart (25cm x 25cm holes one meter apart).

4. ZAI PITS

2. They are used to trap water and increase soil fertility, especially in arid regions with degraded, crusty soils. The pits are planted with a mixture of crop residues, manure, and seeds, and covered with a mulch of grass or leaves.

FLOOD RESISTANT CROP

Having the right, reliable, and quality seeds in hand for a new planting season is of utmost importance.

Water harvesting

Conserve natural springs and ponds to carry out DBI system of irrigation.

Enables irrigation, to protect Kharif crops during dry spells and increase crop area of Rabi season.

It makes the system extremely financially viable as gravity transports the water using zero energy.

The diversion based irrigation systems (DBI) or the gravity flow systems are extremely sustainable

Rain Water Harvesting

Some of the benefits of collecting and storing rainwater include-

- Diminishing flooding, erosion and the flow to storm water drain by reducing peak storm water runoff.
- Reduces demand on wells.
- Reducing water bills and demand on your community's drinking water supply by using rainwater for flushing toilets, washing clothes, watering the garden and washing cars.
- Improving plant growth by using rainwater for irrigation because stored rainwater is free from pollutants as well as salts, minerals, and other natural and man-made contaminants.

Rain Harvesting™

1	Collection Surface	7	Collection Cistern
2	Collection Gutters	8	Overflow Port
3	Gutter Protection	9	Auto-fill / Automatic Top-up Mechanism
4	Rain Head Inlet Filter	10	Pump
5	First-flush Diverter	11	Water Filter
6	Inlet Screen	12	Water Level Indicator

RASHTRIYA GRAMIN VIKASH NIDHI
Rajgarh, Opp. of Bye lane No.8, Aruna Complex, 2nd Floor, Guwahati - 781 003, Assam
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Agriculture Water Management

Under Sustainable Development Investment Portfolio (SDIP) Project
Supported by
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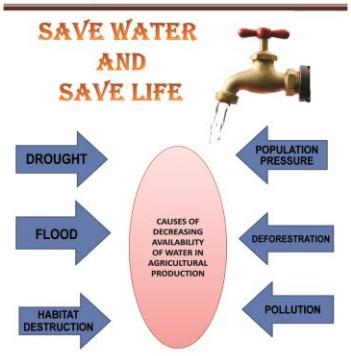
Govt. of Australia

CUTS International

RGVN Reaching the Unreached

"Improving Water And Land Resource Management For Food, Livelihood And Nature"



1. Drip or Micro-Irrigation

- conserves 50 to 70 percent more water than traditional methods.
- water and fertilizer are also more easily absorbed by the soil and plants, reducing the risks of erosion and nutrient depletion.
- Small stream diversions, water collection tanks, or holding ponds can be used.
- Helps reduce evaporation thereby saving water in a cheap and effective manner.

- Stick to the mantra : "per drop more crop" during your cultivation period .i.e. from the point of sowing to the point of harvesting.
- Save water per crop cultivation switching onto water saving farm techniques.
- Growing more food with less water usage.

Save both time and labor

Drip irrigation delivers water (and fertilizer) either on the soil surface or directly to the roots of plants through systems of plastic tubing with small holes and other restrictive outlets.

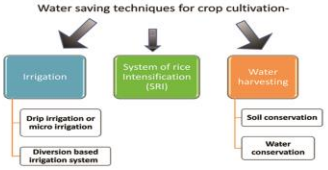
Drip irrigation delivers small amounts of water directly to the plant root; resulting in more crop per drop.

Impact
Small farmers adopting drip irrigation increased their incomes by 50-70% within one harvest. As a result, they are able to feed their children more nutritious food and spend more on their education.

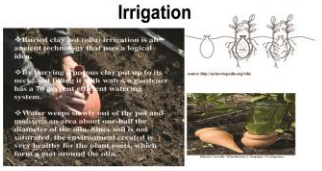
SRI and its prospects

- Main aim is to produce more rice using less water.
- Spaces rice plants more widely and does not depend on continuous flooding of rice fields.
- Successfully being promoted in India and other Countries.
- Uses lesser seed, chemical inputs and promotes soil biotic activities in and around plant roots.

Water saving techniques for crop cultivation-



2. Bottle Irrigation and Pitcher (Olla) Irrigation



Use of canal water for Rabi crops – one of the important aspect of Diversion based Irrigation System