Farmer's Experience

(Village: Belo, Tehsil: Sujawal)

The area is considered pioneer for growing banana crop due to its favorable climatic conditions. It is one of the top three banana growing districts of Sindh. However, the crop productivity showed reducing trend mostly because of adverse impacts of the climate change. Banana crop is more sensitive to drought, excessive rainfall and temperature variations. A huge crop loss occurred during the floods of 2022, 2015 and 2010.

Farmers initiated bed and furrow irrigation three years ago resulting in about **50% water saving** than conventional method and improved plant health using bed planting. Normally, row-row and plant – plant spacing is maintained @ 1.8 x 1.8 m, however in bed plantation the spacing is maintained @ 1.5 x 3.0 m, which achieve the same plant population of 2,000 – 2,225 per hectare. Yield was found to be higher though a comparison of the yield of crop for conventional and bed planation practices needs another 2 years of production monitoring.

Research Outcome

PCRWR Center in Tando Jam initiated the bed and furrow irrigation method in in 2016 to assesses crop yield, water use efficiency, production cost, net return, and soil salinity. Using 3.0-meter furrows and 1.5-meter beds, bananas were planted with 1.5-meter spacing. This method reduces irrigated area by 30%. Findings of the study were encouraging.

Success Story: Combating Climate Change by Progressive Farmer

Farmers initiated bed and furrow irrigation achieving yields of 50 tonnes/ha, with progressive farmers reaching 60-65 tonnes/ha. To combat climate change, mulching (organic mulch, like banana leaves and crop residues) was used as it reduces evaporation, and retains soil moisture. Mulching was also used as crop sowing seasons became earlier (around one month), therefore crop sowing and harvesting times were required to be managed accordingly. Thus, there was a need to shift from conventional flood irrigation practice to the bed plantation followed by mulching.

Key Observations

- **Water consumption**
  1300-1500 mm in furrow planting vs. 2500-3000 mm in conventional methods.
- **Yield**
  35-40 tonnes/ha in furrows vs. 33-35 tonnes/ha in conventional farming.
- **Soil salinity**
  No adverse impact observed on beds.
- **Adoption**
  Easy, less expensive, requires little technical expertise.