



Transforming Traditional to Innovative Farming

Story of Sugarcane and Maize Cultivation with Drip Irrigation

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Feature Story

Excitement was everywhere when Mr. Atiq-ul-Rehman shared with the neighbouring farmers about his bumper yield of sugarcane and maize crops grown with drip irrigation. He got 60,000 kg & 3,840 kg yields of sugarcane & maize, respectively. It was really amazing for those farmers who were not able to get such higher yields with traditional flood irrigation method. Mr. Atiq is a graduate and well-known progressive grower of the area. He has successfully grown sugarcane and maize crops with drip irrigation and has practical information about comparative difference in growing crops with flood irrigation vs drip irrigation in terms of crop yields.

Water Saving 60 %	Crops	Yield (Kg/Acre)	
		Flood Irrigation	Drip Irrigation
Fertilizer Saving 50 %	Sugarcane	40,000	60,000 (50%) ↑
	Maize	3,200	3,840 (20%) ↑



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Mr. Atiq very excitedly indicated that “I have experience to grow sugarcane and maize crops with flood irrigation as well as drip irrigation. As far as I know, there is significant difference in crop yields while reduction of almost 60% & 50% in water and nutrients application, respectively. Actually, drip irrigation precisely applies agricultural inputs in proximity to plant roots as per their requirements besides there is negligible wastage of inputs”.

While explaining his story about innovations, he told that “Initially, it seemed difficult to shift from traditional farming to a new farming method. Actually, there was a complete shift in all agricultural operations for drip irrigation method. However, with the technical assistance of Water Management staff, I managed to tackle any issue during the entire crop season thereby attaining bumper crop”. He added that “although sugarcane is high delta crop but we can save precious water by applying required quantity for irrigation. On the other hand, maize crop is sensitive to both moisture stress & over irrigation and requires regular but light irrigation. It is essential to ensure optimum moisture availability during the most critical phase (45 to 65 days after sowing). Drip irrigation is more suitable for maize crop in dry lands. In order to get desired yield, it is imperative to select site specific variety, quality seed, correct planting season, timely cultural operations and other associated management practices”.

Mr. M. Mansha, Director Agriculture (OFWM), Faisalabad opined that “maize crop responds intensely to nutrients, water and radiation. Radiation is uncontrollable, but we can control water and nutrients to enhance photosynthetic efficiency of plants. Traditional flood irrigation method provides little control as it is inefficient and has less uniformity of inputs application. As such, the best solution to overcome inefficiency issue is growing the crops with drip irrigation”.

While commenting about high efficiency irrigation system, Malik Muhammad Akram, Director General Agriculture (Water Management), Punjab shared that “drip irrigation encompasses bright future as we cannot afford current luxury of flood irrigation in the years to come. Knowing the fact, progressive farmers/innovators have started growing major crops like sugarcane and maize with this latest irrigation method. This is among the very few technologies that can cater water shortage under climate change scenario and exponentially growing population of the country”.

