



## **Response of Foxtail Millet (*Setaria italica*) Under Dryland Condition in Bundelkhand of Uttar Pradesh**

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### **Abstract**

The experiment was carried out during two consecutive *khari* season of 1990 to 1991 in village Rendhar of Model Watershed, Rendhar, Jalaun on farmer's fields under Bundelkhand dryland condition. The main objective was to compare the high yielding variety of foxtail millet with available local check in degraded soils of Bundelkhand, U.P. The ravines affected area of watershed was reclaimed with different soil and water engineering measures. The experimental soil was Parwa, having low fertility status. The foxtail variety G.P.U.S.-6 was compared with local chick of foxtail millet. The crop was fertilized with 60 kg N, 40 kg P<sub>2</sub>O<sub>5</sub> and 30 kg K<sub>2</sub>O/ha. The improved cultivar G.P.U.S.-6 gave highest grain yield by 8.64 q/ha over local check (7.30 q/ha). Thus newly developed cultivar G.P.U.S.-6 gave higher grain yield by 1.34 q/ha or 18.35 per cent in comparison to local check under dryland condition of watershed.

**Keywords:** *Cultivar G.P.U.S.-6, Engineering measure, Maize intercropping, South India, Watershed project.*

### **Introduction**

Foxtail millet form a group of annual cereal crop that is commonly grown in the warmer regions of India, in area that are too dry and poor for other crops like to rice and wheat. It is grown under conditions where other crops generally do not thrive due to low rainfall. Being dry land food crop, which comes to maturity within a period of about 100 days. It is well suited to tracts of low rainfall. It is grown from sea-level to 2000 m high and is an important food grown in the foot-hills of Himalayas.

In India, it is mainly grown in South, i.e, in Karnataka, Meghalaya, Maharashtra, Chennai etc. In some part of maize growing tract, foxtail millet or Italian millet is grown as intercrop with maize. Where it give very better yield and mature with main crop of maize and vacant the field for *rabi* season crops. The grains of foxtail millet contain 11.23% moisture, 12.31% protein, 3.24% minerals, 0.026% calcium, 0.284% phosphorus and 6.25% iron. Therefore, this composition of nutrients is form good nutritive properties.

### **Materials and Methods**

The experiment was laidout during two consecutive rainy season of 1990 and 1991 in the village Rendhar, district Jalaun, Bundelkhand of Uttar Pradesh. The operational area of Modal Watershed, Rendhar, Jalaun of U.P. The main objective was to compare the high yielding variety of foxtail millet with available local cultivar in degraded soil of Bundelkhand. The ravines affected land of watershed area was reclaimed with different soil and water engineering measures. The experimental soil was Parwa (Sandy loam), having pH 7.6, organic carbon 0.21%, total nitrogen 0.02%, available phosphorus 8.8 kg/ha and available potash 221 kg/ha. Therefore the fertility status was low. The pH was determined by Electrometric glass electrode method (Piper, 1950), while organic carbon was determined by calorimetric method (Datta, *et al.*, 1962). Total nitrogen was analyzed by Kjeldahl's method as discussed by Piper, (1950). The available phosphorus and potassium were determined by Olsen's method (Olsen, *et al.*, 1954) and

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Flame photometric method (Singh, 19711), respectively. The variety G.P.U.S.-6 was compared with local variety of foxtail millet at four locations of farmer's fields. The crop was fertilized with 60 kg N, 40 kg P and 20 kg K/ha. The crop was harvested at 100 DAP. The recommended conservation agronomical practice was followed for raising of foxtail millet. The protective irrigations were given to crop as and when required. The experiment was laidout on four farmer's fields.

### Results and Discussion:

The yield data of foxtail millet recorded during pooled year were collected of two varieties reported in Table-1 and discussed here under.



Grains of Foxtail Millet



Foxtail millet crop in the field

**Table 1:** Pooled yield of foxtail millet at agricultural dominated area of watershed in Bundelkhand of Uttar Pradesh

S.N.	Treatment	Pooled yield (q/ha)	Yield increase over local check (q/ha)	% yield increased
1.	G.P.U.S.-6	8.64	1.34	18.35
2.	Local check	7.30	-	-

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