*Indian J. Hill Farmg. 14 (2) : 126 — 127 2001*

# PERFORMANCE OF DIFFERENT SUGARCANE VARIETIES UNDER RAINFED CONDITION

**H.K. SARMA AND C.K. SARMA**
Krishi Vigyan Kendra
Assam Agricultrual University
Khumtai, Golaghat

Sugarcane is an important cash crop of Assam. It is generally grown in spring season. A field experiment was conducted during 1998 and 1999 at the demonstration farm of Krishi Vigyan Kendra, Khumtai, Golaghat, Assam to find out the performance of different varieties of sugarcane. The soil of the experimental plot was sandy loam with pH 5.1, high in organic carbon, low in available nitrogen and available phosphorous and medium in available potassium content. The treatments consisted of six varieties of sugarcane (COBLN 9190, COBLN 9102, COBLN 9103, COBLN 9104, COBLN 9105 and local) were laid out in randomized block design with four replicatons. The crop was planted in furrows of 75 cm apart in the first fortnight of March in 1998. Fertilizer management and other management practices were followed as per the recommended package of practices during 1998 and harvested during first fortnight of January, 1999. After harvesting, the crop was managed as ratoon crop during 1999.

Results of the experiment showed that during 1998, the variety COBLN 9105 produced significantly highest yield (64.0 t/ha) and was at par with the variety COBLN 9104 (62.3 t/ha). COBLN 9104, COBLN 9103 and COBLN 9102 were at par in respect of yield and significantly out yielded the local variety which produced lowest yield (50.5 t/ha). The percent increase in yield in COBLN 9101, COBLN 9102, COBLN 9103, COBLN 9104 and COBLN 9105 over the local variety was 5.5, 17.4, 14.5, 23.4 and 28.7 respectively.

Table 1. Cane yield of Sugarcane varieties

| Treatments | Cane yield (t/ha) | | Percent increase in yield over local variety | |
|---|---|---|---|---|
| | 1998 | 1999 | 1998 | 1999 |
| **Varieties :** | | | | |
| COBLN 9101 | 53.3 | 58.5 | 5.5 | 14.1 |
| COBLN 9102 | 59.3 | 63.7 | 17.4 | 24.3 |
| COBLN 9103 | 57.8 | 60.2 | 14.5 | 14.9 |
| COBLN 9104 | 62.3 | 67.8 | 23.4 | 32.3 |
| COBLN 9105 | 64.0 | 69.7 | 28.7 | 36.1 |
| Local | 50.5 | 51.2 | | |
| CD (P = 0.05) | 4.50 | 3.76 | | |

During 1999, as ratoon crop, the highest yield was recorded in COBLN 9105 (69.8 t/ha) and the increase in yield over the local variety was 36.1%. However, COBLN 9105 and COBLN 9104 were at par in respect of yield and they significantly out yielded other varieties. Variety COBLN 9102 and COBLN 9103 were at at par in respect of yield but significantly superior to COBLN 9101 and local. The percent increase in yield in COBLN 9101, COBLN 9102, COBLN 9103, COBLN 9104, COBLN 9105 over the local variety was 14.1, 24.3, 14.9 and 32.3 respectively.

It was also observed that all the varieties performed well as ratoon crop and produced higher yield than first year planted crop. According to Ethirajan etal. (1976) and Singh (1981), the most important factor that determines the yield of ratoon crop is the number of shoots available in the field. Again, gap filling results in higher cane yield in ratoon (Durai and Ahmed, 1988). Higher yield of these varieties in ratoon was mainly because of more number of shoots and due to optimum plant population which was maintained by filling the gaps. Again ratoon crop being an established crop got more time for elongation of cane as compared to the first year planted crop which required more times for establishment.

## REFERENCES


Durai, R., Mustak Ahmed, A. (1988). *Bharatiya Sugar* **13** : 81-82.

Ethirajan. A.S., Shai, B.K. and Mishra, A. (1976). Proc. Cane Seminar, Mandya.

Sing, S. (1981). Proc. SBI Science Club in Ratoon Management at Cauvery Sugar Factory.