

SUMMARY

Experiments were conducted in Sohag in a clay soil to study the effects of ploughing intensity (2, 3 and 4 times), row spacing (100 and 125 cm) and hoeing (twice and thrice) on yield and quality of sugar cane, during 1997/98 and 1998/99 seasons.

The results showed that:

- 1- Ploughing intensity markedly affected stalk height, N content in leaf and in juice, K% in juice, Brix %, sucrose %, purity % and millable cane number.
- 2- Cane yield increased by 7.2-16.5 % and 13.4-24.9 % due to increasing ploughing intensity from 2 to 3 and 4, respectively. The corresponding increases in sugar yield were 6.0-29.3 and 22.2-48.4 %, respectively.
- 3- Row spacing affected stalk height and diameter, total soluble solids % in leaf and juice, Na, K and sucrose % in juice.
- 4- Planting at 100 cm increased cane yield by 6.5-6.1 % compared with 125 cm, sugar yield increased by 7.1-3.4 %.
- 5- Hoeing did not markedly affect most of the studied characters.
- 6- The highest cane yield was 60- 66.2 t/fed. and sugar yield reached 7.6- 8.2 t/fed. which were recorded by 4 ploughing + 100 cm + 3 hoeings.
- 7- 3 hoeings reduced total dry weight of weeds by 26-51 % compared with 2 hoeings.