

SUNFLOWER PRODUCTION FOR SELF-SUFFICIENCY IN AVAILABILITY OF VEGETABLE OIL

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The climate of Zambia is sub-tropical with summer rains from November to April. The cool dry winter season from May to August is followed by a hot dry season from September to October. Mean annual rainfall increases from less than 600 millimetre per annum in the Southern regions and in some valleys, to over 1200 millimetre in the Northern Province. The elevation varies between 500 metres to over 1500 metres although most of the area is about 1300 metres. The soils are very variable and this affects the natural vegetation as well as the cultivated crops. The most important limiting factor for plant growth is related to the low pH (varying between 3.8-4.5) that is particularly associated with the high rainfall in the Northern regions. Red clay and clay loam soils with higher pH (over 5.0) and better cation exchange capacities are found in Central, Eastern and Southern Provinces. A vast area in the Western part is sandy of the Kalahari basin. This type of soil, is due to the low nitrogen content and free drainage is not recommended for an intensive agriculture. Since 1979, sunflower production has increased by 156 per cent. The projected production of sunflower in 1983 was 2000 metric tonnes compared to 30000 metric tonnes achieved. Much of the 5 per cent shortfall was due to adverse weather conditions in 1982 and 1983. The major problem for producers of sunflower has been the need to improve yields and quality. At present production techniques are very poor with resultant losses in yields and quality. This is especially true of sunflower production which has the greatest potential for improvement both at low input levels where management is very poor and higher levels where hybrid varieties offer very substantial increases in yield and oil content. Two factors have been important: lack of proper grading procedures and price incentives to improve quality; and the weakness of extension services, which have not been able to spread improved techniques to a sufficient number of farmers. In addition to this the adoption of improved farming methods is hampered by the limited availability and poor quality of inputs and their unreliable delivery. On the basis of current production trends and the projections, it is likely that oil seed production will continue to expand and production in 1991 would be over 60000 metric tonnes, though not enough to reach self-sufficiency. Reaching self-sufficiency depends primarily on sunflower production. During the last few years successful inter-specific crosses between *Helianthus annuus* and *H. argophyllus*, have provided evidence that it is possible to produce varieties of sunflower tolerant to low pH soils, drought and aluminium toxicity conditions. It is to be noted that, the marketing and processing functions will impose a substantial bottleneck on the production of edible oil unless significant improvements are made.