Sunflower Cultivation in Mozambique: History and Perspectives

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Abstract

Sunflower (*Helianthus annuus* L.), was first cultivated in Mozambique, with the purpose of producing forage. Statistical data on production show that it was only in the 60's that the crop started to have some importance for oil production. From 1968 until the end of the colonial period (1974), sunflower production suffered a significant increase that lead to exportation of oil to other Portuguese colonies and to Portugal. With the independence of Mozambique in 1975, there was a change in the strategies and priorities for the agriculture sector, and sunflower gradually lost its importance in the national production. During the last 5 years, the interest for this crop was renovated and there had been some initiatives at research and comercial level to reestablish this crop in Mozambique.In this article, a review of the history of this crop in Mozambique is given. Main producing zones, cultivated areas and production data are shown. Main varieties cultivated and data on seed and oil production are also refered. Finally, the present situation and the perspectives for the development of the crop are described.

Introduction

Before the introduction of sunflower, coconut (*Cocos nucifera*) , groundnut (*Arachis hypogea*) and sesame (*Sesamum indicum*) were the principal traditional sources of cooking oil.

Up to the 60's the reports on sunflower production show that it was mainly used for forage production and not much interest was shown for its use as an oil crop (Comissão Técnica de Planeamento e Integração Económica, 1968).

From 1960, the colonial government decided to give more importance to this crop, not only in Mozambique but also in other Portuguese colonies, like Angola, and sunflower started to be used as a rotation crop with coton, and the cultivated areas and production started to increase.

Sunflower oil started gradually to be used in the local market while simultaneously some seed was exported.

In the last part of the colonial period, sunflower was already a well established crop in Mozambique with a significant part of its production being exported to other European countries like Germany and Denmark, besides Portugal.

With the Independence of Mozambique in 1975, the area under sunflower and production started to decline. The decline was due to the significant reduction of technical support resulting from the exodus of Portuguese technical staff, and the change in government Agricultural strategy.

The civil war that started to intensify in 1982, reduced the possibilities for research and production of Agricultural crops, including sunflower. Although some research on this crop had been done in the 80's, the production of this crop almost stopped and the consumption of sunflower oil imported from South Africa increased significantly.

In 1992, with the end of the civil war, the interest for sunflower was renewed and presently, the perspectives for the development of research and production of this crop in Mozambique are very positive, and efforts are being made by producers, researchers and oil industry towards that end.

2. Sunflower production before independence

2.1. Production, varieties and research

The first available registered data on sunflower production are from 1941. From 1941 to 1970, average annual increase in sunflower production was about 1000 tones (Figure 1). In this period, most of the production was concentrated in the central province of Manica and Sofala. The average yields were low (between 130-517 kg/ha) (Correia, 1972). By 1968, the total cultivated area was 9603,8 ha.

One of the first varieties to be used in Mozambique was the black `Peredovick', originaly from the Soviet Union. Through the work of the Research Institute, the varieties `GOR-104' and `GOR-101' were introduced from South Africa. These varieties had in average 38-44% of oil and were suitable for regions with an average rainfall above 1000 mm per year (Correia, 1972).

The results of the research done on this crop provided recommendations on sowing dates, densities,rotation systems and other cultivation practices . By

1970 yield increase of 1500-2000 Kg/ha was attainable in some regions with favourable conditions.

2.2. Oil extraction and exportations

The oil extraction from sunflower seed was done in three cotton processing plants in the south, centre and north of the country. In Table 1, a description of the quantities of refined oil processed from 1962 to 1970 is presented.

There was a clear tendency to increase the oil extractions from 1966-1970. The oil produced was mainly for local consumption, although a small part was exported to Portugal.

Most of the exportations made during this period were in the form of oil seeds (Table 2).

At the last phase of the colonial period (1973-1974), the perspective was to increase the sunflower production, not so much for the local consumption but mainly for exportation, as the demand for sunflower oil in Portugal was increasing and exportation to other European countries like Germany was also possible (Correia, 1972).

3. Post-independence period

With the Independence of Mozambique in 1975, most of the technical staff working in the different areas, including agriculture went back to Portugal.

During the first years of independence, the government concentrated efforts in training mozambican staff for the different areas of the economical and social sectors of the country. In the agricultural production, priority was given to the production of food crops, and although sunflower production never ceased completely, the area cultivated and yields decreased significantly.

The lack of variety maintenance and consequent degeneration of the existing varieties, reduced drastically the yields and the % of oil in the seeds in the different regions of sunflower production (Jimenez & Eberlin, 1987).

In 1978, the National Research Institute (INIA), initiated a research program on selection of resistant varieties to the main diseases and pests. This program was interrupted in 1980. As a result of the research done, some varieties, namely `CCA73' and `CCA75', were identified as resistant to some of the main diseases. Unfortunately, the seed company was neither able to multiply the seed of those varieties nor to import from other countries (Gomes, 1988).

As a consequence, the farmers continued to use the old material they had which on one hand was a mixture of different varieties and on the other hand was susceptible to pests and diseases, resulting in very low yields.

With the intensification of the civil war in the different production areas and the consequent instability of the population, it was difficult to have a clear picture of the situation of sunflower production throughout the country. The data available from 1981 to 1992 refer to the quantities that have been commercialized (Table 3).

Table 3 shows clearly the drastic reductions in the commercialization of sunflower seed throughout the years.

In the last decade, the industry stoped completely to produce pure sunfower oil and sunflower oil consumed in Mozambique is being totally imported from South Africa.

4. Perspectives for the development of the crop in Mozambique

In the recent years, there had been a notable expansion of sunflower production in the Southern African region, particulary in the Republic of South Africa. Similary, in Mozambique, the interest for sunflower production and oil extraction by the local industry is increasing.

In 1992, a research project financed by the italian government was established in the Faculty of Agronomy and Forestry Engeneering of the University Eduardo Mondlane in Mozambique. The research has been concentrated in selection of the "new" introduced varieties and the "old" varieties that are already adapted to the local conditions, for characters like disease resistance to rust (*Puccinia helianthi*), oil percentage and yield.

Contacts had been established with a seed company to multiply the varieties improved by the project and with some NGO's interested in developing the crop with the farmers. Some interesting results had already been achieved.

At the level of small scale farmers, there is a great interest in producing sunflower as a cash crop, to be sold to the industry.

The strategy for the development of this crop is to invest in research. Once good varieties are developed and available to the farmers, and the extraction industry is wiling to buy seed, there are good indications that the country has all the necessary conditions to develop this important oil crop.

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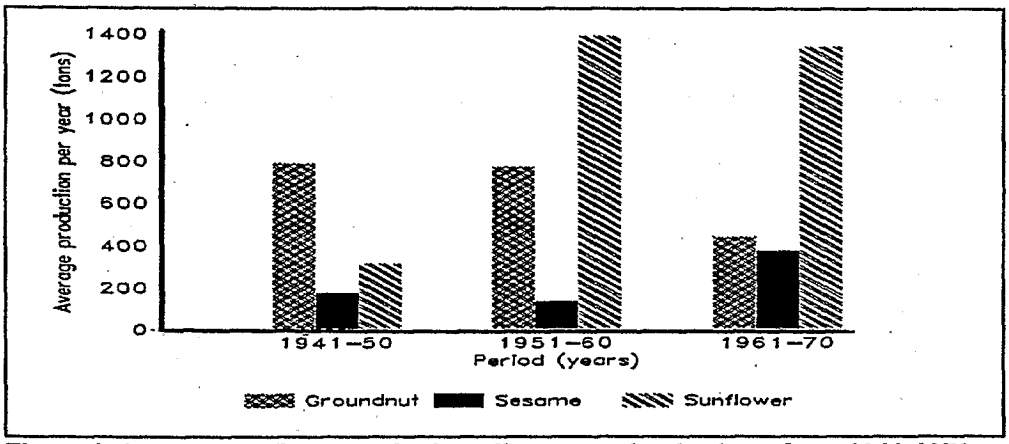

Figure 1. Average sunflower and other oil crop production/year from 1941-1970

Table 1 : Sunflower oil production in Mozambique from 1962 -1972

Year	1962	1963	1964	1965	1966	1967	1968	1969	1970
Tons	13,46	-	106,49	65,31	114,48	70,66	146,81	167,69	136,00

Source : Correia, 1972 in "A cultura do Girassol em Moçambique

Table 2. Sunflower seed exported from 1966-1971

Year	1966	1967	1968	1969	1970	1971
Tons	461	1471	1343	2659	3777	3600

Source : Correia, 1972 in " A cultura do Girassol em Moçambique"

Table 3. Sunflower seed comercialized from 1981-1992

Year	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
Tons	12040	10800	7269	5018	5691	867	1062	1022	1643	1042	1473	432

Source: Estatísticas Agrárias 1992, Ministério da Agricultura, DNEA, Maputo, 1994