

SUNFLOWER STUDY MEMORANDUM IN TURKEY

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It has been noted that vegetable oil consumption is increasing parallel to the growth in Turkish population. And almost the half of the domestic vegetable oil consumption (48%) is covered by sunflower oil in Turkey. Therefore, sunflower oil has an important role in Turkish diet and market.

PRODUCTION

As it is observed from the table given below the production has been increasing year by year :

Years	Area sown (hectares)	Seed production (tons)	Seed yield kg/hectare	Oil production (tons)	Oil yield kg/hectare
1962	81,000	60,000	738	12,000	150
1965	160,000	160,000	1,000	42,000	
1968	240,000	230,000	958	90,000	
1971	396,000	465,000	1,174	175,000	
1972	495,000	560,000	1,131	214,000	432

Because of the dry-farming conditions in the area where sunflower culture takes place the seed yield is comparatively low. The seventy percent of the total sunflower growing area is located in the Thrace and Marmara regions. The sunflower culture covers 16.7% of all field crops in this region. In these regions the average annual rainfall and temperature figures run as follows :

District	Average annual precipitations (mm)	Average annual temperature °C
Thrace regions	560	13.2
Marmara regions	640	14.3

BREEDING

Our experiment studies on sunflower commenced at a period when the „*Orobanche* parasite“ damage was wide spread in Turkey. And thereupon our research works were started at the Yeşilköy Institute. The experiments were carried out at the beginning with 68 different samples of native and foreign origin, and the varieties of Krasnodar origin were found of good adaptability to our conditions. Out of these, the varieties VNIIMK 1646, VNIIMK 8931 and Peredovik are the best ones.

As a result of our selection work the oil percentage has been found as 46—50% within the variety VNIIMK 1646 which has been grown in Turkey since 1964. The average oil content of this variety is 46%. The varieties VNIIMK 8931 and Peredovik have been grown in Turkey since 1968.

These three varieties constitute the „commercial seed triangle“ in Turkey and their oil output is 42—47%.

The elite seeds in our Institute have a 50—53% oil content. *Helianthus tuberosus* and *Helianthus annuus* have been intercrossed. Intercrossing was also made reciprocally between a local variety and VNIIMK 1646. At the present, we are trying to develop this type.

PROBLEMS

1 — Diseases. The activity on sunflower started when the damage of *Orobanche* pest was wide spread in Turkey. This is why the effort was concentrated on the resistance to *Orobanche* parasite at the beginning of the work. And consequently today *Orobanche* is not a problem at all. Now, in fact, the mildew is a problem on which it is necessary to think over carefully. The mildew disease appears on shallow lands and moist areas when the weather is rainy during the spring.

2 — At present the oil content is satisfying with the existing varieties. As a matter of fact only 50% of the Turkish farmers are using certified seed, because they have been practising the cereal farming through the ages and sunflower growing is a relatively new idea for most of them in this country.

RESEARCH TEAM

The man power on the sunflower research work is very short and the training of the technical personnel staff has not yet been completed