

## Oil Crop Cultivation in Sweden in 1992

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### Decreased acreage and a too small seed production

The aim of the cultivation of oil crops in Sweden is a total seed harvest of about 300.000 tons. That quantity corresponds to a total acreage of oil crops of about 160.000 hectares, provided a normal distribution of areas among the different types of Brassica crops. (Table 1).

Since several years there has been a decreasing area of spring sown crops and in the same time an increasing interest in winter rape. A delayed harvesting time of preceding crops and unsatisfactory weather conditions in August 1991 however caused a temporarily reduced area of winter rape. Therefore propaganda, encouraged by a promise of a preserved seed price from 1991, was carried on to increase the areas of the summer types. In summer rape this resulted in a raised area with about 30 %. The area of summer turnip rape however remained on the same level as in the preceding year. So in 1992 the harvested acreage of oil crops was only about 125.000 hectares.

**Table 1. Oil crop cultivation in Sweden. Areas and harvested quantities.**

Cultivated crops	Harvested areas, 1.000 hectares				Production, 1.000 tons, seed of trade quality at 8 % moisture content			
	1986-1991 in average	1990	1991	1992*)	1986-1991 in average	1990	1991	1992 <sup>*)</sup>
Winter rape, 0	57,6 <sup>**)</sup>	82,6	31,6	-	162 <sup>**)</sup>	237	70	-
Winter rape, 00			41,9	47,8			99	126
Winter turnip rape, 0	5,4	8,2	7,2	2,1	9	13	10	3
Summer rape, 00	51,9	41,9	38,6	50,3	77	76	47	82
Summer turnip rape, 00	43,6	29,3	25,8	25,2	58	46	28	37
<b>Total</b>	<b>159</b>	<b>162</b>	<b>145</b>	<b>126</b>	<b>306</b>	<b>372</b>	<b>254</b>	<b>248</b>

\*) Approx figures of 1992

\*\*\*) Winter rape of both 0- and 00-type

Corresponding to the actual fall in cultivation area the harvested seed quantity was reduced from the normal level down to about 250.000 tons. The seed demand of the domestic crushing industry principally depends on the possibilities of the rape meal on the Swedish fodder market. There the rape meal almost has doubled its market share during the past decade. The annual amount of seed for crushing is therefore now about 300.000 tons. So for the season 1992/93 the shortage of oil seeds has to be supplied by import of about 40.000 tons.

### **In average: Normal yields and a very good seed quality**

As shown in table 2, the mean yields in 1992 of the different oil crops were tolerable normal. Like the circumstances during a series of preceding years the wintering was very good with a dropping out of only 5 % of the area of winter rape. The severe drought in the summer damaged the summer crops only in the southern districts, where the yields often were halved of the normal. In the main districts of growing summer rape and summer turnip rape in the middle of Sweden the seed yields however were on unusually high levels.

The climate during the season was not adapted for more severe attacks of the usual diseases like Sclerotinia and Alternaria. Winter as well as summer crops therefore mostly were uncommonly sound without any necessity of treatment with chemicals.

**Table 2. Oil crop cultivation in Sweden. Yields and quality of seed**

Cultivated crop	Seed yield kg/hectare at a moisture cont. of 9 %			Quality of harvested seed in 1992		
	1986 - 1991 in average <sup>*)</sup>	1991	1992	Oil content in % of dry matter	Protein cont. in % of dry matter in defatted meal	Chlorophyll content, ppm
Winter rape, 0	2.655	2.235	-	-	-	-
Winter rape, 00	-	2.385	2.650	48,3	38,2	7
Winter turnip rape, 0	1.550	1.330	1.580	45,4	42,1	11
Summer rape, 00	1.590	1.260	1.655	45,9	46,1	19
Summer turnip rape, 00	1.360	1.130	1.495	43,5	40,7	12

<sup>\*)</sup> Including winter rape 00 in 1991

The season also resulted in a very high seed quality. In all types of the crops the oil content was on a high level. The high content of protein, especially in the summer rape, depends on that this crop in Sweden is dominated of the cultivar **Paroll**, which has a very high protein content. Despite uneven ripeness in many fields of the summer crops, the content of chlorophyll in average shows very satisfying low figures.

#### **Only double low cultivars except for in the winter turnip rape**

The cultivation of winter rape was carried out by the German cultivars **Ceres** and **Libraska**. In comparison with the preceding year the sown area of winter rape for harvest in 1993 increased with 50 % to about 75.000 hectares. In this case the growers made extensive use of Svalöf's new 00-cultivar **Casino** in addition to the two cultivars mentioned above.

In accordance with table 2 the small area of winter turnip rape is still cultivated with a single type crop. The only variety here is **Per** from Svalöf and the harvested seed quantity is not used for production of oil and meal in the Swedish crushing industry.

Dominating cultivars in summer rape are **Sv Paroll** and **WW Katarina**. In summer turnip rape **Sv Agena** now is the leading cultivar.

#### **Success for rape seed oil on the Swedish market**

The development with an increasing use of rape seed oil for human consumption continues. Until 1990 about 35 % of the total use of vegetable oils for food was rape seed oil. Since then the share of the domestic oil shows a growing figure which for 1992/93 is estimated to more than 60 %.

The increasing use of rape seed oil in the food industry is supported by the new nutrition view and an intensive information work, carried on by a collaboration between the oil seed growers and the Swedish crushing industry.

#### **A new market system raised the seed price**

Until the harvest of 1992 the price of oil seeds to the growers was decided by discussion between the government and the participants in the branch of oil seeds. This was a rather successful way to get a well adapted cultivation area and production. Both in 1991 and 1992 the growers' basic price of oil seeds at a moisture content of 9 % was 3:05 Skr/kg. That means in proportion to the basic prices of cereals a price quotient of about 2,6.

In order to get lower costs and a less regulated system for the domestic trade with oil seeds the government according to the harvest of 1993 decided to test a new method of managing the purchase of the seed quantity produced. This means that instead of central administrated agreements with the growers the different grain-dealers have to at first make agreements with growers and then make offers of quantities and prices to the government. In that way the new system according to an unchanged total quantity of seeds, 300.000 tons, for harvest in 1993 resulted in some higher basic prices in comparison with the preceding year.

The view of an entrance into the Common Market now engages people in the government to form a suitable intermediate system, adapted to expected EC-rules. Probably the grower's payment for oil seeds in 1994 will consist of a lower price per kg combined with an amount of compensation per hectar.

#### **Research work on cultivars, cultivation technique and the market**

The testing of new material from Swedish as well as foreign breeders has allways filled a large place in the research work. The actual results show that in winter rape German and also French cultivars often have higher yields than the Swedish. Perhaps there are some difficulties to combine the demand of a good winterhardiness with a high yielding disposition? Also in summer turnip rape there are now Finnish cultivars, which yield better than the Swedish breeding products.

In cultivation technique the work now is mainly concentrated on plant protection and fertilizing. It seems to be very important to get a satisfactory method to prognosticate attacks of diseases in order to consider the real need of treatment with chemicals. On fertilizing some of the most important tasks are to find out the best way of make use of low dry matter manure and if the oil crops have demand of an extra application of sulphur.

The development of growing markets for oil and meal causes a continued research work both on the fodder protein and the oil with the aim of well adapted products for different purposes.