

Oil Crop Cultivation in Sweden in 1990

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Increasing acreage of winter rape

Since 1982 the cultivated acreage of oil crops in Sweden has almost every year reached about 165.000 ha. Also in 1990 the total cultivation was at that level. During the last two years the acreages of the different oil crops, however have strikingly been changed. The acreage of the winter crops, especially winter rape, is increasing. At the same time the acreage of the summer crops, especially summer turnip rape, decreases (Table 1). This development is due to several contributing circumstances such as subsidized fallows, and for winter crops favourable weather conditions concerning sowing, growth in the autumn and wintering.

Yields at a normal level

The yield of the different oil crops was fairly normal in 1990 (Table 1). Good established winter crops and a mild winter caused however expectations of a yield of winter rape like the very high figure of 1989. Especially in the southern districts there were frost damages in spring, attacks of both pests (*Psylliodes chrysocephala*, *Ceutorrhynchus assimilis* and *Dasyneura brassicae*) and also diseases (*Verticillium dahliae* and *Sclerotinia*), which explain the actual unrealized expectations. In the summer crops attacks of parasites were generally at a normal and rather low level.

The total production increases

The increased acreage of higher yielding winter rape has of course influenced the total production of rape seed in Sweden. By still a normal total cultivation on about 165.000 ha, the production in both 1989 and 1990 reached about 370.000 tons in stead of the previous normal production of 320.000 tons (Table 2).

Seed quality and payment

In Sweden there are several different elements which determine the seed quality. The payment to the grower concerns the cleaned quantity at a moisture content of 18 %. The price is regulated after admixture content in delivered raw product and actual content of oil and chlorophyll, content of glucosinolates in 00-seed and since 1989 also after the protein content.

Concerning the quality in 1990 the figures of oil content show fairly ordinary mean values except for summer turnip rape which has a lower value than normal. The protein content of the winter crops has the same value as in 1989. In the summer crops the protein content in 1990 is however considerably lower than in the previous year, especially in summer rape with a decrease from 45,4 % to 41,8 %. In both 1989 and 1990 the cultivation of summer rape was completely dominated by the variety Puma which in all tests shows a remarkably high content of protein. The chlorophyll content of winter rape in 1990 is unusual high. The reason for this is uneven ripeness in combination with a period of unfavourable weather conditions just at the time for harvest in the middle of July.

Going for double lows also in the winter rape

Since several years all cultivation of the summer crops is of 00-quality. In 1990 the dominating cultivar of summer

rape was Svalöf's Puma. In summer turnip rape dominated the cultivar Svalöf's Kova. The winter rape cultivation in 1990 was carried out by the single low varieties Weibull's Rustan and Svalöf's Janus. In winter turnip rape Svalöf's 0-variety Per was the only cultivar. The increasing acreage of winter rape and the market development have however made an earlier introduction of double low cultivars necessary.

This autumn there is sown about the same acreage of winter crops as in 1988 and 1989 (winter rape 82.000 ha and winter turnip rape 8.000 ha). About 60 % of the acreage of the new winter rape crop is established by use of the 00-cultivars Libraska, Ceres and Arabella. The remaining part of the winter rape acreage dominates by the new marketed 0-variety Nestor from Svalöf. In the field trials from the south of Sweden in 1990 the actual german 00-cultivars have given almost the same results as the best single low cultivar. Further to the north there were however some damages of a harder winter. In mean of all the tests the 00-cultivars therefore show a yield about 10 % lower than that from the newest Swedish single low cultivars.

Table 1: Oil crop cultivation in Sweden in 1990 in comparison with earlier years

Cultivated crops	Harvested acreage in hectares			Seed yield kg/ha at a moisture content of 18%			Quality of harvested seed in 1990		
	1984-88	1989	1990	1984-88	1989	1990	Oil content in % of dry matter	Protein content in % of dry matter in defatted meal	Chlorophyll content, ppm
Winter rape	42.250	69.300	82.590	2.950	3.650	3.230	46,0	38,2	23
Winter turnip rape	2.270	8.080	8.160	1.940	2.220	1.960	45,4	40,0	16
Summer rape	57.790	50.650	41.940	1.900	1.820	2.010	45,3	41,8	19
Summer turnip rape	59.400	36.920	29.270	1.600	1.630	1.760	42,8	37,5	15
TOTAL	161.710	164.950	161.960						

Table 2. Rapeseed produced in Sweden 1985-1990

Year	Production in 1000 tons at 8% water
1985	321
1986	322
1987	260
1988	252
1989	373
1990	approx. 370