

Oilseed Rape in Denmark 1991

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Rapeseed is the very predominant oil crop in Denmark. The total area in 1991 has so far been estimated at 275,000 ha. Other oil crops make up less than 1,000 ha. The area of winter rape was

increased as in the previous years, and the area of spring rape was reduced. The total area was almost the same size as in 1990.

Table 1. Rapeseed production, 1987-91

1,000 ha	1987	1988	1989	1990	1991*
Winter rape	37	27	78	160	202
Spring rape	213	171	152	110	73
Total	250	198	230	270	275
Yield, kg/ha					
Winter rape	26,8	30,1	36,1	32,5	27,9
Spring rape	21,4	24,5	24,4	24,5	23,0
Average per ha	22,2	25,3	28,4	29,2	26,0
Total yield, 1,000 tons	550	504	665	793	734

* provisional figures

The yield

The total yield for 1991 has so far been estimated at 734,000 tons, which is 7 per cent less than the year before, when the total rape yield constituted a record, the variation being 14 per cent less in winter rape and 6 per cent less in spring rape.

The winter rape was sown at the right time, but from mid-september and 3 weeks ahead there was a major rainfall hampering the growth of some of the crops. The growth started early after

a successful wintering, but during the last part of April cool weather with night frost in some parts of the country and even cool weather in May as well as a deficiency of precipitation inhibited the growth of both winter and spring rape. In June, it was still cold. These conditions made both types of rape flower 2 to 3 weeks later than in 1990. The flowering and the period from flowering till harvest was shorter in 1991 than in 1989 and 1990, and contributed to a somewhat lower yield level compared to the above-mentioned years.

Weed control

The result of the less favorable growth conditions was that, generally speaking, the need for weed control was higher than in the preceding years. This was demonstrated in experiments where weed control increased yields in a relatively high number of situations. Especially *Matricaria* sp. has been rather dominant.

Diseases and pests

The most frequent diseases in Denmark are *Sclerotinia sclerotiorum*, *Alternaria brassicae* and *Botrytis cinerea*. *Botrytis cinerea* and *Alternaria brassicae* were fairly widespread in 1991. Especially infestations of *Alternaria brassicae* in spring rape affected many yields. Very strong infestations were found in spring rape near areas of infested winter rape.

Infestations of *Ceutorrhynchus assimilis* and *Dasyneura brassicae* of the first generation were relatively weak in winter rape, whereas strong infestations of the second generation *Dasyneura brassicae* were found in spring rape. These strong infestations are the consequences of the changed distribution of area between winter and spring rape as well as favorable conditions for the second generation *Dasyneura brassicae* in 1991. In a few places, *Meligethes aeneus* was seen as a strong infestation in spring rape.

Consequences of the new rape scheme

By July 1st, 1992, the conditions for rape, sunflower and soya productions will be changed in the EC, as a new market scheme will take effect from the harvest in 1992. In future, the farmer's income will derive partly from a market price that is determined by a world market price and partly from hectare subsidies.

This implies that the marginal income per kg sold rape will be reduced considerably and thereby it will be necessary to reduce the input in order to get the best possible output.

A price reduction of e.g. DKK 2,65 per kg to DKK 1,25 per kg oilrape seed will imply that in the coming season 1992, the nitrogen supply to rape must be 30-40 kg lower per ha than it has been till now. For the time being, the recommendations for winter rape at a yield level of 37 hkg per ha will be changed to 170 kg N per ha and for spring rape at a yield level at 29 hkg per ha to 140 kg N per ha.

The lower price for rapeseed also implies that the control efforts against weed and diseases

must be reduced considerably. In future, there will be no treating of diseases during autumn.

Weeds. The experiments carried out on weed control in both winter and spring rape have showed that the net increased yield has often turned out to be negative. With a lower rape price, this will be more common. Only where loss causing weeds (e.g. *Sinapis arvensis*, waste grain) or great amounts of weeds occur, it is possible to expect net increased yields.

Sclerotinia sclerotiorum is one of the most important diseases to rape in Denmark. Generally, it has been profitable to treat against this disease when about 10 per cent of the plants are infested. In future, it will only be profitable when 15-20 per cent are infested. It is rather difficult to give recommendations on when to carry out a treatment. So far, advice has been based on germinated apothecia from depots in different yields around the country. For the time being, instructions based on «risk points» are being developed.

In future, expensive fungicides like Ronilan and Rovral Flo will not be used against *Sclerotinia sclerotiorum*. A treatment with Derosal, which is cheaper, might however still be used in some areas where this disease has shown to be a major problem.

Alternaria brassicae. There is no monitoring system for warning of this disease. For a number of years, quite a lot of experiments were carried out; but in some experiments, other diseases occurred together with *Alternaria brassicae*, which is the reason why the yield results cannot be blamed totally on this disease. In a few experiments, with strong infestations, a good effect against the disease was obtained and considerably increased yields for a treatment with Rovral Flo in stadium 5.1.-5.2. In future, the costs of a treatment with Rovral Flo will be converted into rapeseed at about 4.0 hkg per ha. The consequence will be that the control of this disease will only rarely turn out to be profitable, and therefore, the control will not be used in praxis.

A price drop on rape seed will not influence the profitability of pest control in rape.

Furthermore, tomorrow's lower prices will lead to an important reduction in the difference of gross margins between winter rape and spring rape. As there might be some difficulties in establishing the winter rape in time because of the relatively late grain harvest and the risk of outwintering, the area of spring rape will probably again be larger than the area of winter rape.