

Opinion of the Scientific Committee on Plants, adopted on 18 May 1999, on the Invocation by France of Article 16 ('safeguard' clause) of Council Directive 90/220/EEC with respect to a genetically modified oilseed rape notification C/UK/94/M1/1 (Plant Genetic Systems N.V.) - (SCP/GMO/150-final)

Background

The Commission adopted a Decision on 6 February 1996 (96/158/EC) concerning the placing on the market for growing for seed production of a genetically modified oilseed rape line notified by PGS. The modified rape is tolerant to the herbicide glufosinate ammonium and is derived from the male sterile line MS1Bn or the fertility restoration line RF1Bn or their progeny.

The French Competent Authority informed the Commission in a letter dated 20 November 1998, of its decision to invoke Article 16 of Directive 90/220/EEC. By means of a decree, which took effect on 16 November 1998, the commercial use in France of the oilseed rape produced by PGS has been prohibited. The justification of the prohibition is concern over the environmental impact of genetic escape through volunteers and hybrids with wild *Brassicae* and the agricultural consequences of the spread of herbicide tolerance in both cultivated and non-cropped habitats. The Scientific Committee on Plants has been asked to advise the Commission:

Whether the information submitted by France constitutes relevant scientific evidence which would cause the Committee to consider that this product constitutes a risk to human health and the environment?

Comment

The SCP, which was only established in 1997, was not consulted by the Commission before the Decision of 6 February 1996. However the Committee did subsequently assess a similar hybrid oilseed rape (C/B/96/01) derived from genetically modified parental lines MS8 Bn and RF3 Bn, tolerant to glufosinate ammonium and notified by PGS. The Committee published its Opinion on 19 May 1998.

After examining and considering the information and data provided in the dossier, against the background of available knowledge in the areas concerned, the Committee, in 1998, concluded that there is no evidence to indicate that the placing on the market of hybrid seed of swede rape (consisting of crossings of parentals derived from the genetically modified swede rape lines MS8 and RF3) with the purpose to be used as any other swede rape is likely to cause adverse effects on human health and the environment.

The risk of genetic escape from modified crop plants will depend on dispersal and cross-pollination with other plants of the same or different species. Successful hybrid formation depends not only on the sexual compatibility of the recipient species (whether the same or related wild species) but the two species must flower simultaneously, share the same insect

pollinator (if insect pollinated) and be sufficiently nearby for the transfer of viable pollen. The consequences of successful transfer will depend on the sexual fertility of the hybrid progeny, vigour and the fertility of subsequent generations or their ability to propagate vegetatively.

Oilseed rape as a crop is capable of both self-pollination (70%) and cross-pollination (30%) and is mainly pollinated by wind and attracted insects. Comparative data on substantial equivalence, germination, establishment, plant phenotype and parameters of normal agronomic performance suggested that transgenic rape will not behave differently from untransformed plants in their ability for genetic transfer or dispersal. Available evidence shows no differences in the ability of transformed and untransformed rape plants to outpollinate. While rape crops will naturally hybridise with other cultivars in the vicinity there may be a very low level of natural crossing with related species particularly *Brassica rapa* and *B.juncea* under field conditions. Forced hybridisation has been demonstrated with *Raphanus raphanistrum* and *Sinapis arvensis*. Any viable progeny will have no competitive advantage in the absence of selection by herbicide containing glufosinate-ammonium.

In its risk assessment the Committee assumed that any such transfer will occur at a low level. It therefore considered the more relevant question, whether this can be contained by risk management and whether it is an environmental or agronomic problem.

The available evidence from the scale of release at that time suggested that volunteers can be controlled by agronomic practice (cultivation and the use of an alternative broad spectrum herbicide) provided that adequate monitoring procedures are in place to identify spillage, dispersal and any subsequent volunteers. Normal management methods for wild *Brassicaceae* including cultivation, rotation and alternative herbicide should be maintained.

The dispersal of transgenic rape seed should not be significantly different from that of untransformed plants. There is no evidence that transformed plants which germinate in adjacent uncropped habitats will have any significant ecological advantage in the absence of herbicide containing glufosinate-ammonium. Rape is a poor competitor and is not regarded as an environmentally-hazardous colonising species. Modified rape is no more invasive than unmodified plants and can be controlled by the combination of cultivation and the use of alternative non-selective herbicides. Potential transgenic exchange is unlikely to lead to establishment as a result of reduced viability and high sterility of any hybrid plants and competition.

The information provided by the French Competent Authority was taken into consideration by the Committee in formulating its original Opinion in 1998 and is not considered to change the environmental assessment and advice to the Commission.