M Goetz et al. Proceedings of the National Academy of Sciences of the United States of America, (2001) Vol. 98, No 11 p6522.

Pollen is a potent gene vector, not only is it widely distributed in the air and by insects, it is designed to transfer genetic information at the end of its journey. Some concern has been raised at the potential for GM crops to disperse their modified genes by this mechanism.

Pollen development within the plant is a sensitive process that can be significantly affected by a number of different genetic mutations.

This study cloned a gene which leads to a block during the early stages of pollen development, resulting in an infertile male plant. All other aspects of plant growth and development are unaffected.

Comment
Introduction of this type of mutation to genetically modified crops could significantly reduce the risk of vertical transfer of genes from a genetically modified plant to a wild type plant, without affecting the vigor of the plant.

The vertical transfer of introduced genes has been subject to significant concern of many parties involved in the GM debate. There are potential liability issues, as it could lead to the spread of alien genes into the population, and have unpredictable effects on local ecosystem. Research into this area could have considerable implications for the environmental safety of genetically modified crops.

Prevention of pollen formation should be an effective mechanism for reducing the risk of vertical transfer. It is unlikely (but not impossible) that the mutation could be transferred to wild populations by other mechanisms.