

Performances of the recessive genetic male sterile hybrid *Brassica napus* varieties (Lines) and their hybrid seed production

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There are some 8 million ha oilseed rape currently grown in China. Breeding for high yield and disease resistance with double low quality is still main aim in China. Some CMS and GMS have been used as pollen control systems to make hybrid variety in order to reach the goal. A GMS system, which comprises recessive genetic male sterile line, temporary all maintainer and restorer, has been used for this purpose. Some double low hybrid varieties and lines have been bred through this system. Those varieties and lines show higher yield in both hybrid seed production and F1 yield with disease resistance (tolerance) to *Sclerotinia sclerotiorum* in official trials and commercial production. Three hybrids have been approved to register and commercialize at national and provincial levels. The others are under the official trials. Experiments and commercial production show that the system has some advantages over other GMS and CMS systems have been used in China. For instance, it is easier for this system to be used for making hybrid seed and obtaining higher hybrid seed (at least 50% higher) than other GMS and CMS systems currently used in China. It is also excellent to incorporate disease resistance (tolerance) into a hybrid variety through the system. The potentialities for rapeseed breeding by using this system will be discussed.