

# The new technologies on hybrid rice


Prof. Peng Jiming

( China National Hybrid Rice Research and Development Center)

## 1、 technology on the third generation of hybrid rice



### Seeds set on the panicles with two different colors



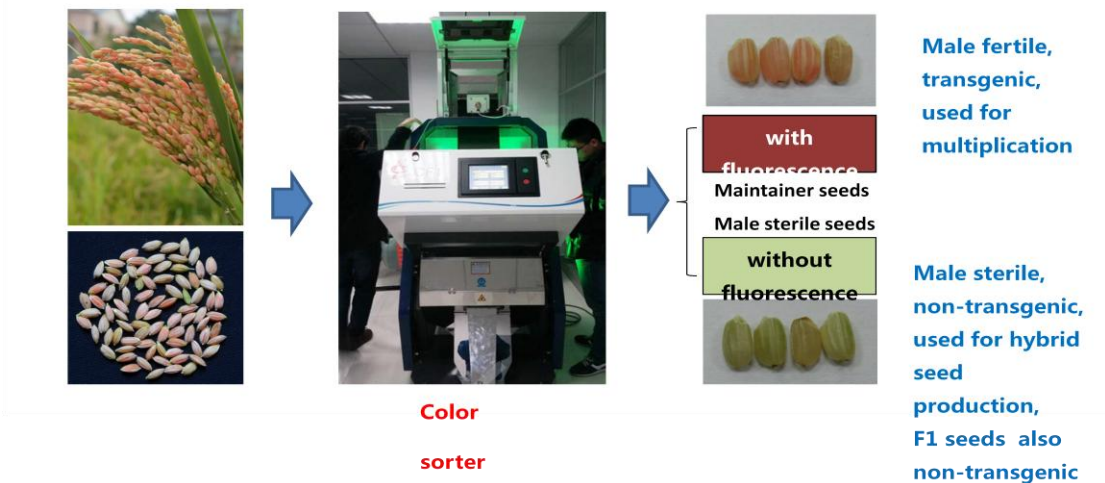
**Pink color**

**Yellow color**

About half of the F1 seeds set on the panicles of the genetic engineering male sterile line appears pink color (with fluorescence) and half shows common (yellow) color (without fluorescence), so it is very convenient for hybrid seed production and GEMS line multiplication.



### Separating of maintainer seeds and male sterile seeds



**with fluorescence**  
Maintainer seeds  
Male sterile seeds

**without fluorescence**

**Male fertile, transgenic, used for multiplication**

**Male sterile, non-transgenic, used for hybrid seed production, F1 seeds also non-transgenic**

**Color sorter**

(from Prof. Yuan Longping)

## 2. technology on Multi-panicle Type Super Hybrid Rice

(1) Concept: its effective panicle number shows a significant advantage compared with the trial check or major variety planted, and its total grains per panicle belongs middle and large size panicle.

(2) Technical index: the effective panicle is more 10% than the Check's or is over 2.85 mil/ha in the trial; total grains per panicle are between 150 to 200 (middle and large panicle size, single-cropping rice in Changjiang river valley)

(3) typical varieties:

### ① Ming S



② Ming liangyou 143



③ Longliangyou 0078



3. technology on saline-alkaline tolerance hybrid rice

- (1) establishment of the national centre on saline-alkaline tolerance rice
- (2) new rice hybrids on saline-alkaline tolerance



(from Qingdao Haishuidao R&D Centre)