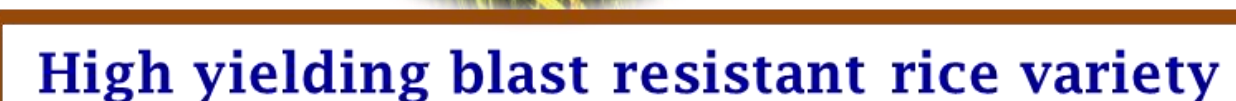
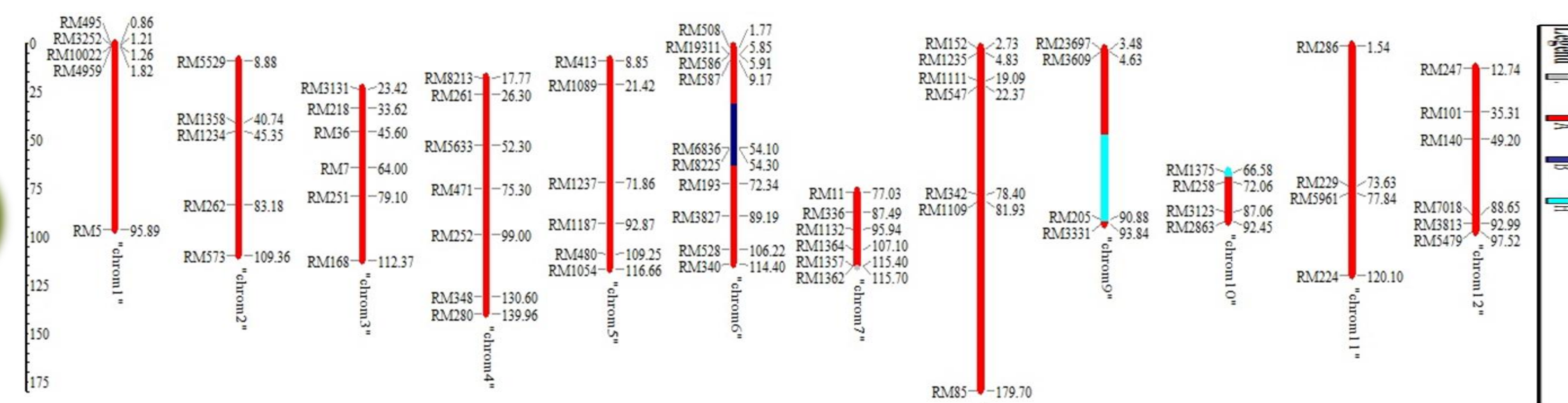




Research flow chart



Blast disease is one of the major fungal diseases infecting rice production in Malaysia. This disease can cause up to 50% yield loss during severe infestation. The breeding program for development of blast resistant varieties without compromising high-yield is the most durable and environmental friendly process of enhancing sustainable rice production.

Broad-spectrum blast resistance genes (*Piz*, *Pi2* and *Pi9*) were introgressed from local resistant rice variety (Pongsu Seribu 1) into high-yielding but highly blast-susceptible (MR219) through marker-assisted backcross breeding. The agronomic performance of advanced blast-resistant lines was evaluated for yield performance in glasshouse and four granary rice areas.

1. Yield 10 to 12 t/ha
2. The newly developed blast resistant rice variety reduces yield loss and increase productivity by 20-30%
3. Environmental friendly with less application of fungicides

1. Increase income of rice farmers through high yield harvest and reducing cost of productions (less use of fungicide).
2. The expected total hectareage for the new variety after three years would be more than 20% (100,000 ha) of rice cultivated area in Malaysia.
3. Increase total rice production and self sufficiency level (SSL) which will reduce the import of rice and to meet the target of food security.
4. Reduce environmental pollution using environment-friendly blast resistant variety (Sustainable Agricultural Practice).



1. Rice farmers
2. Rice seed producers
3. Rice breeders



4 QUALITY EDUCATION

www.sciencepark.upm.edu.my