

# POLYMORPHISM SURVEY BETWEEN MAHSURI MUTANT AND TETEP USING SSR MARKERS

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## INTRODUCTION

Climate change is affecting food security globally including rice sector.

Rice blast, a disease severely impacting rice yield.

Mahsuri Mutant, resistance to blast is produced from mutation of Mahsuri in 1979 (Mohamad et al., 2006).

The gene governing the blast in Mahsuri Mutant is not yet identified.

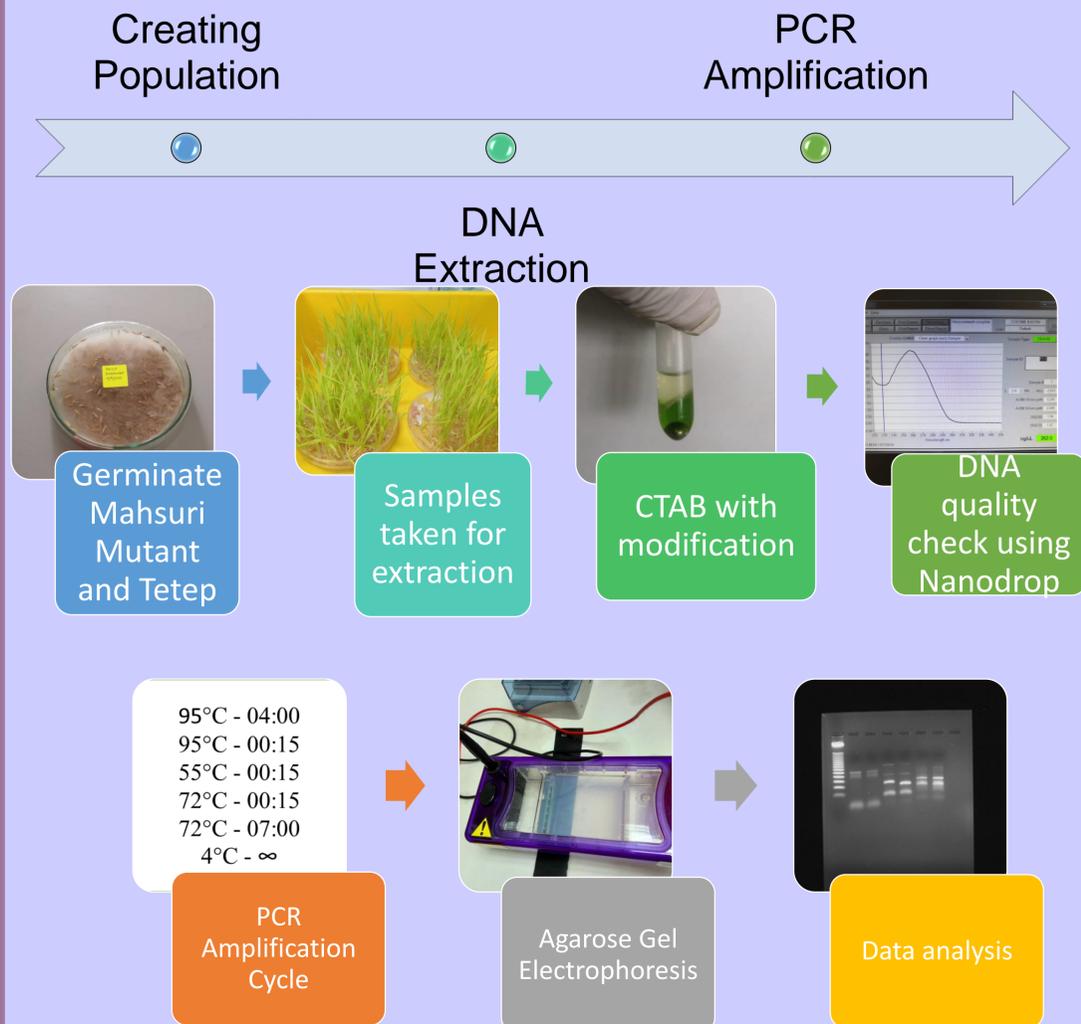
Tetep is variety from Vietnam with blast resistance gene and often used in blast studies (Joshi et al., 2019)

Study on blast gene may help in providing better solution to blast disease.

## OBJECTIVE

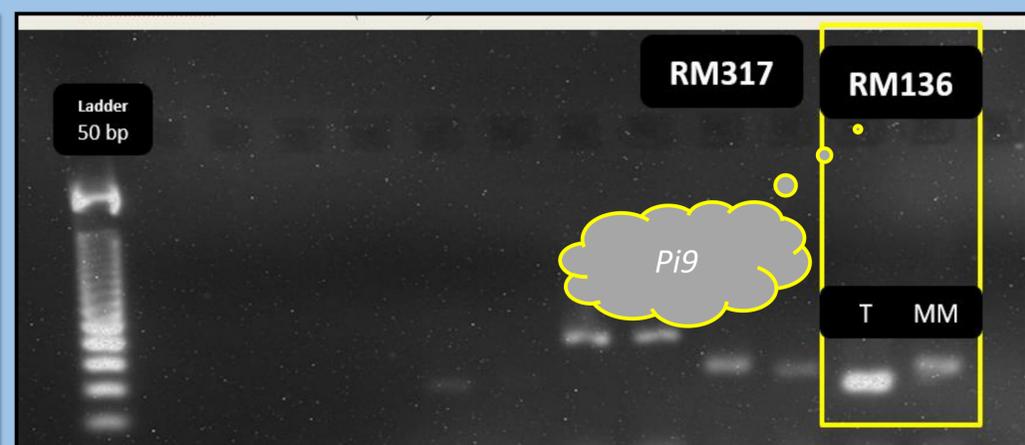
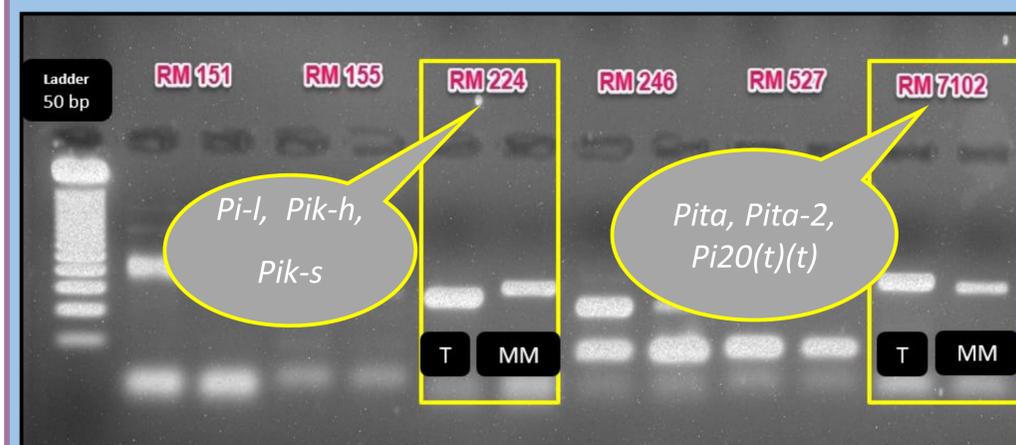
To identify the **polymorphic markers that linked to blast resistance gene** between Mahsuri Mutant and Tetep

## METHODOLOGY



## RESULTS & DISCUSSION

- There are **9** polymorphic primers (15.5%)
- 3 out of 9 polymorphic primers are categorized as linked to blast resistance gene; RM224, RM7102 and RM136 (Miah et al., 2013)



- Tetep is well known to be having blast resistance gene and most of established gene are from the variety itself.
- The differences in size product between Tetep and Mahsuri Mutant showed that the gene presence in Tetep is not available in Mahsuri Mutant.

## CONCLUSION

- Mahsuri Mutant potentially have another blast resistance gene that yet identified.
- The gene identified from this research may helps broaden the information on blast resistance gene.

## ACKNOWLEDGEMENT

Extension of gratitude is given to **International Atomic Energy Agency (IAEA)** for providing grant for this project under **CRP:RC23039**. Thanks to **Malaysian Nuclear Agency (MNA)** and **Universiti Kebangsaan Malaysia (UKM)** for all the research facilities provided.

Joshi, S., Dhatwalia, S., Kaachra, A. et al. 2019. Genetic and physical mapping of a new rice blast resistance specificity *Pi-67* from a broad spectrum resistant genotype Tetep. *Euphytica* 215:9 <https://doi.org/10.1007/s10681-018-2332-y>  
Mohamad, O., Mohd, N., Abdul, R., Alias, I., Azlan, S., Othman, O., & Golam, F. 2006. Development of improved rice varieties through the use of induced mutations in Malaysia

