Rice Seed Production Technology (Rice SPT)

Rice SPT Process

Msca1/Msca1 msca1/msca1

Fertile *Sterile*

SPT Maintainer

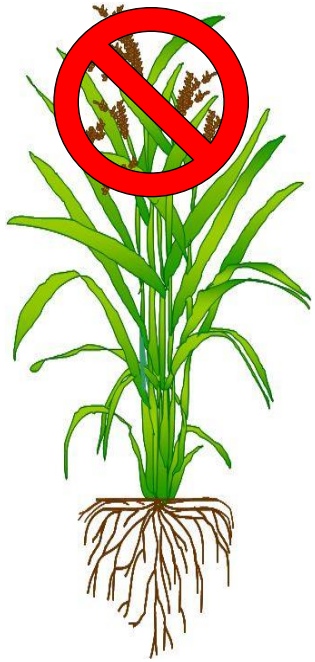
(msca1/msca1; SPT/-)

Transgenic

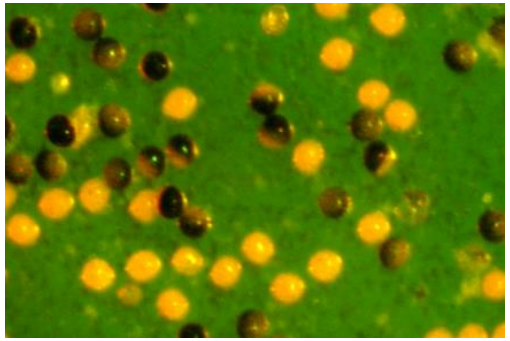
- Utilizes naturally-occurring rice gene to produce male sterile parent lines
- Efficient process for male - sterile parent seed increase

Rice SPT Maintainer

Fertility Restorer — ***Non-Functional Pollen*** — ***Seed Color Marker***



Msca1



α-Amylase

Male-sterile
(msca1/msca1)
Non-transgenic

DsRed2

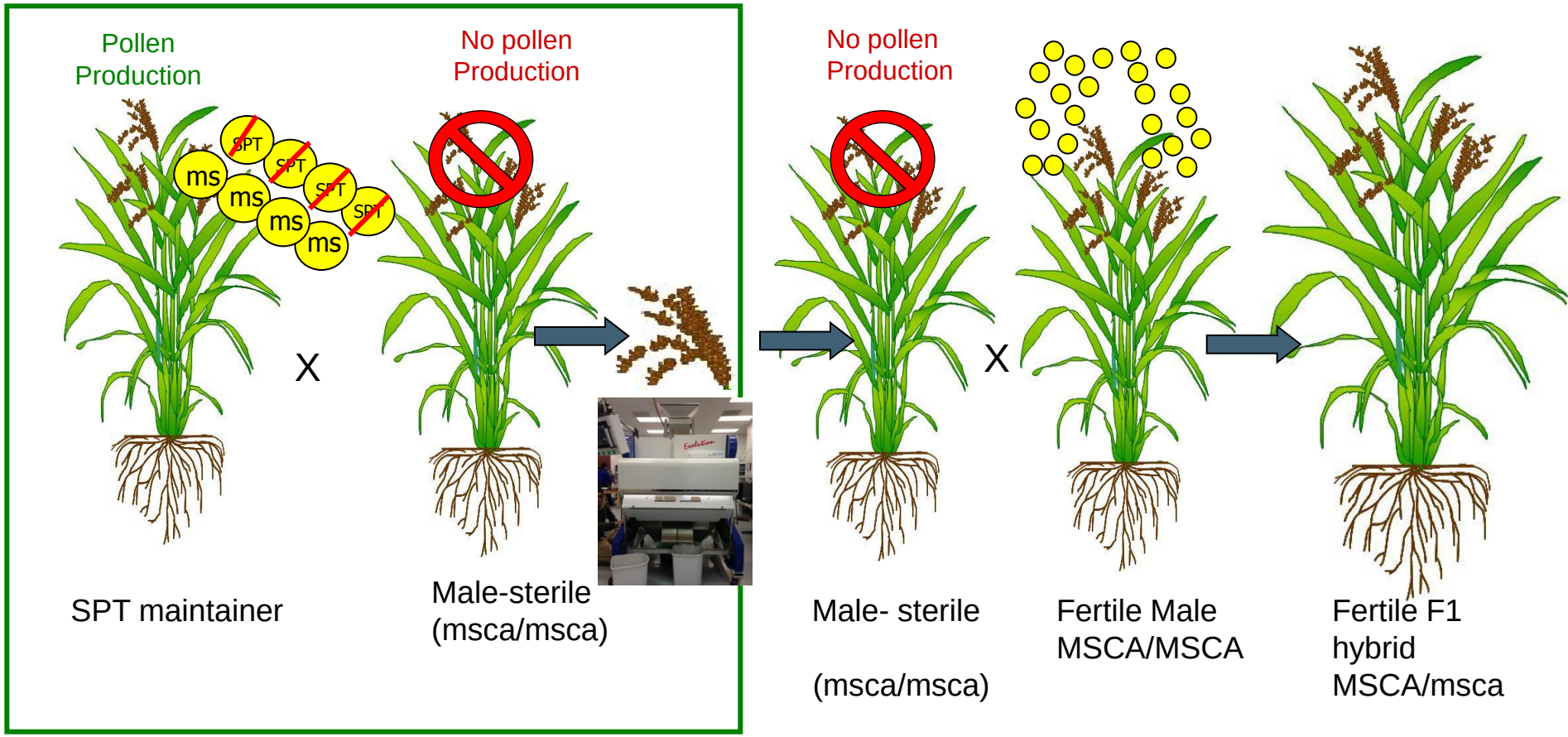
SPT Maintainer
(msca1/msca1; SPT/-)
Transgenic
Fertile

DUPONT
PIONEER.

SPT-Based Hybrid Seed Production

Male-sterile Female parent seed production

F1 Hybrid Seed Production



Transgenic *Non-transgenic* *Non-transgenic* *Non-transgenic*

Rice SPT – The solution to better Hybrid Rice

- An innovative breeding and hybrid seed production process
- Eliminates germplasm dependency
- Improves ability to breed for better hybrids
- Increases product quality and yield potential
- SPT process transgenes are reliably and predictably absent in male-sterile female lines or hybrid products
- Compatible with current hybrid rice production practices
- Proven and deployed technology in Corn

Thanks