Propagation techniques for Jackfruit (*Artocarpus heterophyllus*)

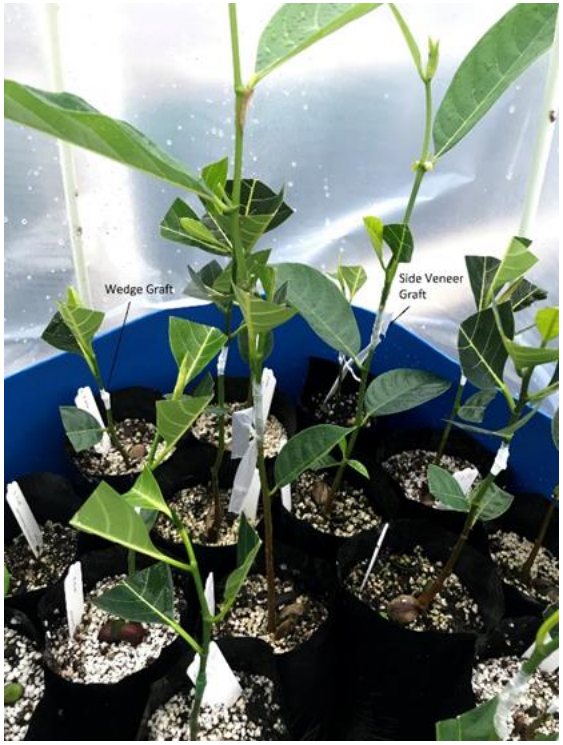
Massimo Bianco and Yan Diczbalis

CRCNA

Queensland Government

Grafting: Rajang variety

- On seedling rootstock 4 to 6 weeks old and 3 to 6 months old
- Technique: wedge and side veneer grafts
- Success graft rate was generally less than 30%
- Short period from grafting to field planting
- Taproot developed







Marcotting: on seedlings trees

- The process was one of trial and error rather than conducting a real trial
- Use of hormones
- Use of different potting mixes
- Success rate from 0-40%
- Short period from marcotting to field planting













Cuttings: Rajang variety

Soft wood cuttings were used (shoot tips with leaves hardened off and a developed growing shoot)



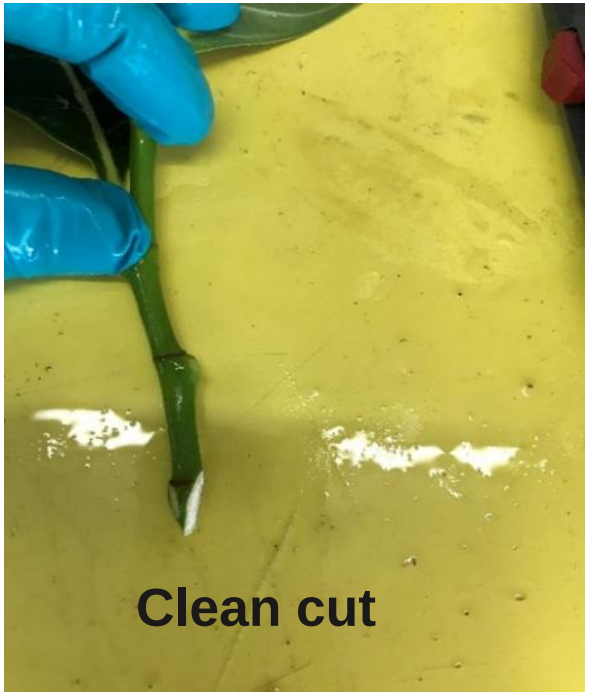




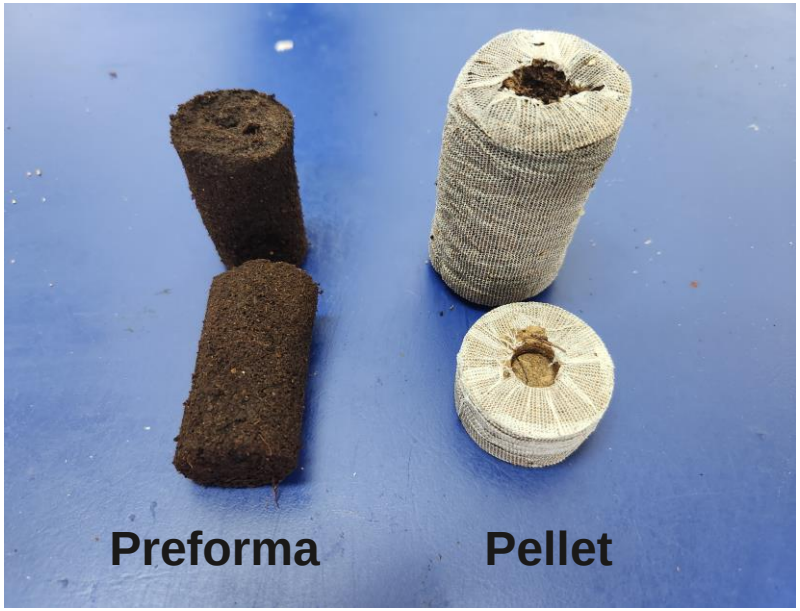
Rooting Hormone	Percentage (%) of cuttings which struck roots at the end of four months
0.075g/L IAA & NAA (Auxinone® solution)	25
3g/L IBA (Purple Clonex® gel)	58
8g/L IBA (Red Clonex® gel)	75
3g/kg IBA (Rootex-P® Powder)	83
8g/kg IBA (Rootex-PD08® Powder)	75



Potting media/preparation	Cutting # @12Apr21	Potted # @11Jun21	Strike %
Forestry Tubes (1:1 Perlite:Peat) Pre-centred hole	20	2	10.0
Forestry Tubes (1:1 Perlite:Peat) Control	20	14	70.0
Preforma Plugs Pre-centred hole	23	5	21.7
Preforma Plugs Control	24	6	25.0



Rajang Selection	Rough Cut			Clean Cut		
Date	Cutting Count	Root Count	Final Rooting %	Cutting #	Rooted #	Final Rooting %
7 May	26	0		26	0	
11 June	26	1		22	0	
16 June	26	0		12	9	
23 June	26	2		10	11	
5 July	26	0		5	5	
Total count on 12 July 21		3	11.5		25	96.2



Type of plugs	Mean Strike %
Jiffy Pellet	68.3
Jiffy Preforma	54.9

Cuttings strike rate and tree age in (months).	Mean Strike %
Block 1 (18)	45.0
Block 2 (144)	59.1
Block 3 (120)	88.0
Block 4 (96)	54.0










Preliminary investigation of chemical alternative for post-harvest rot control

Massimo Bianco and Yan Diczbalis

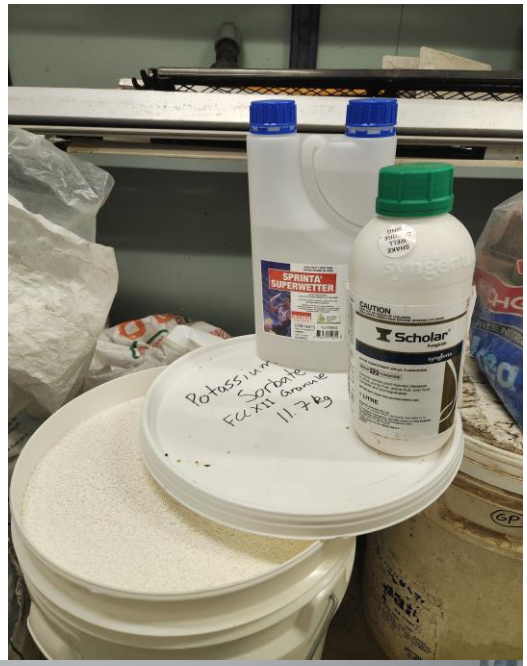
Queensland Government

Rhizopus stolonifer is one of the causal agents of soft rot in Jackfruit



Treatments: Rajang variety

1. Water wash (Control)
2. Water wash + Scholar (Fludioxonil)
3. Water wash + 2% Potassium Sorbate Dip
4. Water wash + 2% Potassium Sorbate Dip + adjuvant oil
5. Water wash + 6% Potassium Sorbate Dip
6. Water wash + 6% Potassium Sorbate Dip + adjuvant oil








Water
Scholar
Potassium sorbate 2%
Potassium sorbate 6%

Data collection:

- Days :1,4,6,8,12
- Rot coverage:
  0%, <10%, 10-30%
  30-50%, >50%
- Maturity stage:
  Hard or Soft



Results:

Treatment	Mean rot coverage % at 12 days
Potassium S. 2%	8.8
Potassium S. 2% + oil	17.5
Potassium S. 6%	57.5
Potassium S. 6% + oil	22.5
Scholar	15
Water Wash	42.5



What next?

- Repeat the trial with more fruit


Thank you