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Varietal Influence of Sree Athulya against Red Spider Mite *Tetranychus* *cinnabarinus* (Boisduval) (Acarina: *Tetranychidae*)

The red spider mites, *Tetranychus cinnabarinus* (Boisduval) (Acarina: Tetranychidae) is one of the serious mite pest causing heavy infestation result in blotching and bronzing of leaves followed by premature leaf fall cause severe yield loss of 48.1 to 64.8 per cent in tapioca. Outbreak and heavy population of this mite was recorded during dry summer periods in Salem and Namakkal districts of Tamil Nadu. The mite population build up was low in Sree Athulya planted plots (4.5 mites /cm² leaf area) and higher in Mulluvadi planted plots 28.6 mites /cm² leaf area. Sree Athulya variety prevented the buildup of mite population as compared to local cultivar Mulluvadi. The yield in the Sree Athulya planted plots was ranging from 37.2 to 34.0 ton/ ha compared to 26.6 ton/ha in the farmers practice.

NATURE AND DEGREE OF PROBLEM IDENTIFIED

Tapioca locally known as Maravalli (or) Kuchi Kilangu is extensively cultivated by the farmers of Salem in 17084 ha. The red spider mites, *Tetranychus cinnabarinus* (Boisduval) (Acarina: Tetranychidae) is one of the serious mite pest causing heavy infestation result in blotching and bronzing of leaves followed by premature leaf fall cause severe

**Red spider infested leaf****Red spider mite****Egg****Protonymphs and Deutonymphs****Male and Female mite****Sree Athulya Tapioca**

Results

Sl. No	Parameters with unit	Demo	Control
1	Mite population (No. /Cm ² leaf area)	4.5	28.6
2	Extractable starch content (%)	29.1	26.3
3	Yield (Q/Ha)	356	266
4	Net return	81364	34271
5	BCR	2.04	1.43

Mite recorded on 10 leaves per sample at Low, Medium, Heavy infestation levels

Sl. No	Mite infestation level	Sree Athulya			Mulluvadi		
		Adults	Nymphs	Eggs	Adults	Nymphs	Eggs
1	Low	2	21	46	14	122	280
2	Medium	4	40	82	20	146	300
3	Heavy	4.5	52	93	29	162	312

yield loss of 48.1 to 64.8 per cent in tapioca. Outbreak and heavy population of this mite was recorded during dry summer periods in Salem and Namakkal districts of Tamil Nadu. The adult mites are brick red in colour with two prominent spots. They multiply quickly and aggregate on the undersurface of the leaves. The symptom spreads over the whole leaf which turns reddish brown in colour. With the rapid increase in mite population

and severity of attack, the growing tips can die causing excessive branching.

KVK INTERVENTION HIGHLIGHTING TECHNOLOGY

- The FLiDs conducted in Kamalapatty and Kuralnatham villages in Panamarathupatty block of Salem Dt in an area of 4 ha.

- Demonstration of cassava variety Sree Athulya for resistance against red spider mites, *Tetranychus cinnabarinus* (Boisduval) in field.
- Sree Athulya planting materials @ 4800 setts/0.4 ha were supplied to the beneficiaries along with local cultivar Mulluvadi.
- The mite population build up was low in Sree Athulya planted plots (4.5 mites/cm² leaf area) and higher in Mulluvadi planted plots 28.6 mites /cm² leaf area.
- Sree Athulya variety prevented the buildup of mite population as compared to local cultivar Mulluvadi.
- The yield in the Sree Athulya planted plots was ranging from 37.2 to 34.0 ton/ha compared to 26.6 ton/ha in the farmers practice.
- Farmers able to get high remuneration due to high extractable starch content of 29.1 per cent from Sree Athulya as compared to 26.3 per cent from Mulluvadi.
- The percentage increase in yield of 33.8 per cent was attained from Sree Athulya with favourable BCR of 2.04 as compared to local cultivar with BCR of 1.43.

FEEDBACK FROM FARMERS

Farmers responded positive over the variety and horizontal spread of this technology in 5 more villages and the tapioca variety Sree Athulya was accepted significantly because of increase in yield and farmers saved Rs.2600 for two rounds of pesticide sprays in Athulya variety. Setts demand increased and the setts were propagated in KVK and distributed for the benefit of the farming community.

CONCLUSION

The population build up of red spider mite was low in Sree Athulya compared to local cultivar Mulluvadi with highest yield of 37.2 to 34.0 tons/ha with comfortable B:C ratio of 2.04. The extractable starch content was higher in Sree Athulya which leads to high remunerative income from this variety. Moreover the high resistant nature to red spider mite, the two rounds of pesticidal sprays were saved which helps farmers in saving Rs. 2600/- from the cultivation expenses.