




INFLUENCE OF DIFFERENT ORGANIC MANURES ON NUTRIENT UPTAKE BY UPLAND COLEUS AND LOWLAND CASSAVA



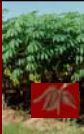
Swadija, O. K., Archana, B., Pamila Vimalraj and Padmanabhan, V. B.

College of Agriculture, Vellayani,
Thiruvananthapuram- 695522
Kerala, India.



INTRODUCTION


Cassava – *Manihot esculenta* Crantz



- The most important tuber crop of Kerala


	India	Kerala
➤ Area (lakh ha)	2.4	0.94 (46%)
Production (million t)	6.7	2.54 (38%)
Productivity (t ha ⁻¹)	27.9	27.0

- Rainfed crop in Kerala in upland
- Now moving to lowland



Coleus – *Solenostemon rotundifolius* (Poir) Morton

- Short duration (5 months)
- Tubers as vegetable
- Tubers possess good cooking quality





Organic Manures – indispensable component

- Farmyard manure – the most commonly used
- Coirpith compost – coirpith composted with *Pleurotus* sp
- Poultry manure – largely used for cassava in lowlands
- Neem cake – concentrated organic manure



EXPERIMENTAL SITE

Instructional Farm, College of Agriculture, Vellayani,
Thiruvananthapuram, Kerala

Location – 8.5° N latitude, 77.9° E longitude
29 m above mean sea level

Climate - Tropical Humid climate





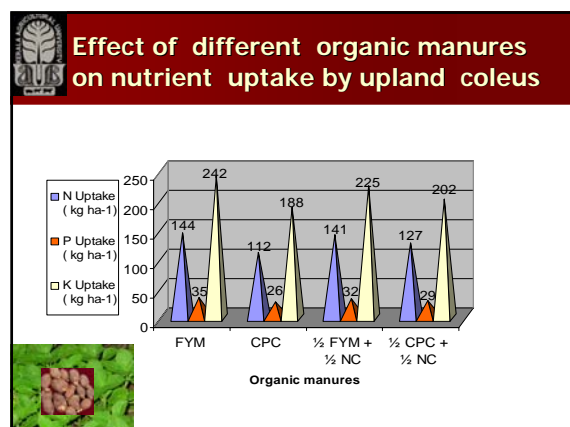
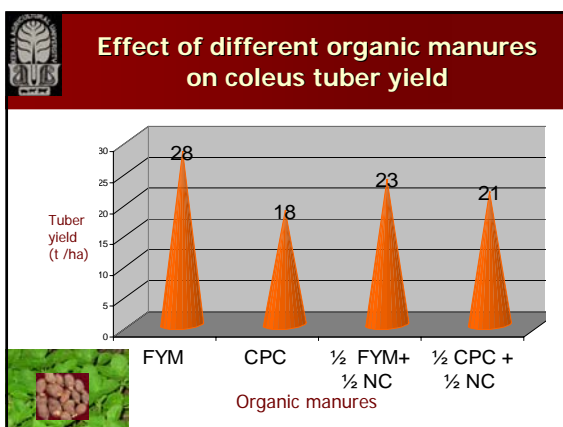
SOIL CHARACTERISTICS OF EXPERIMENTAL SITE

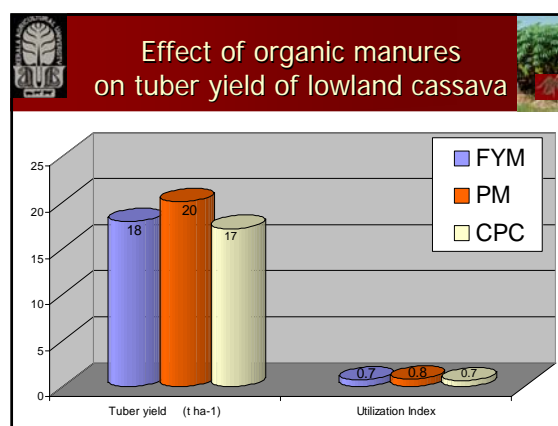
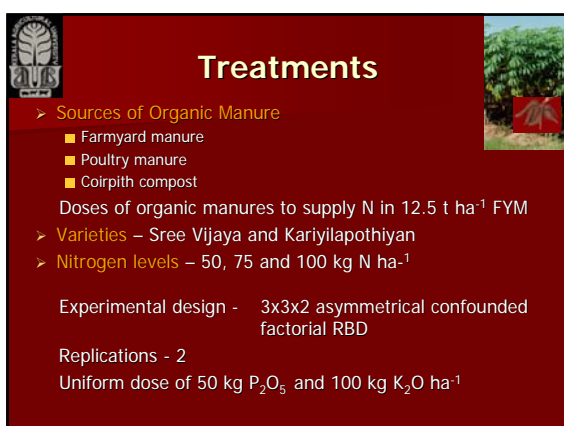
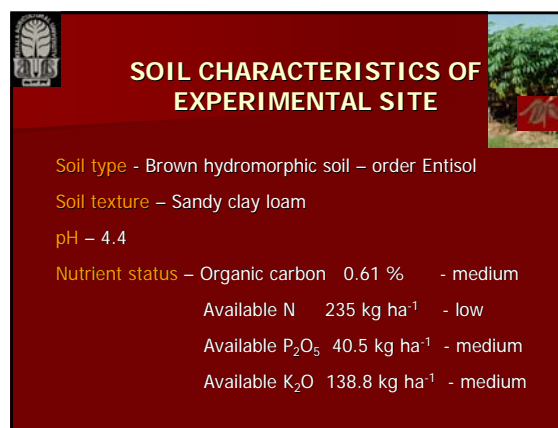
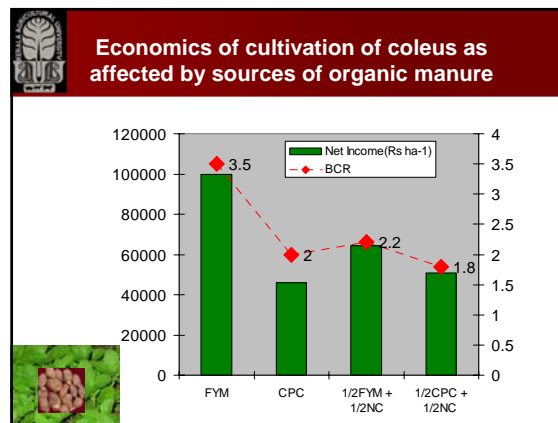
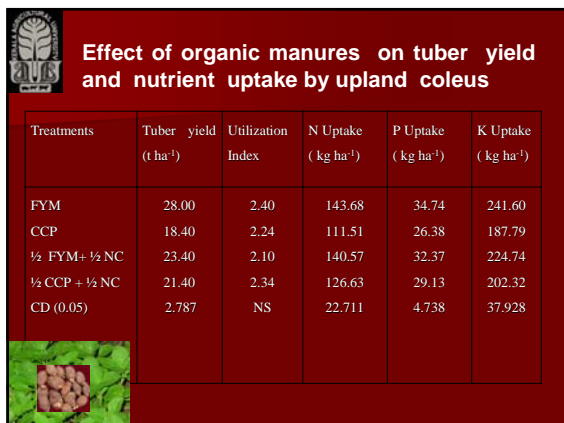
- Soil type - Red loam - Vellayani series - order Oxisol
- Texture - sandy clay loam
- pH - 4.8
- Nutrient status – Organic carbon 0.39 % - low
 - Available N 263 kg ha⁻¹ - low
 - Available P₂O₅ 40.6 kg ha⁻¹ - medium
 - Available K₂O 115.5 kg ha⁻¹ - medium

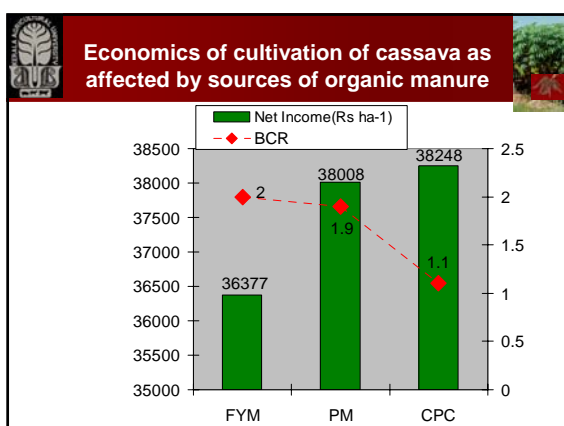
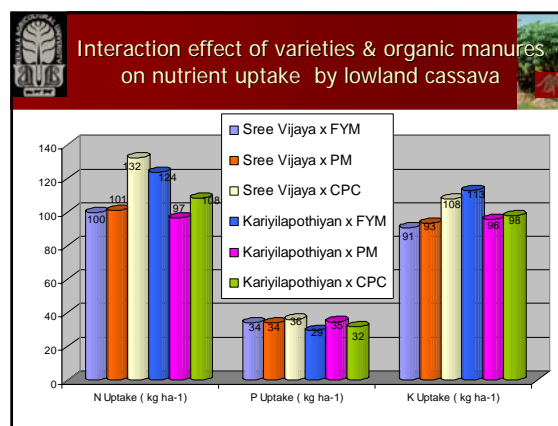
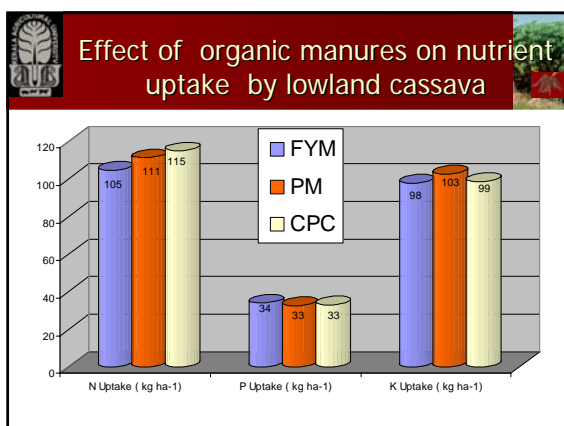
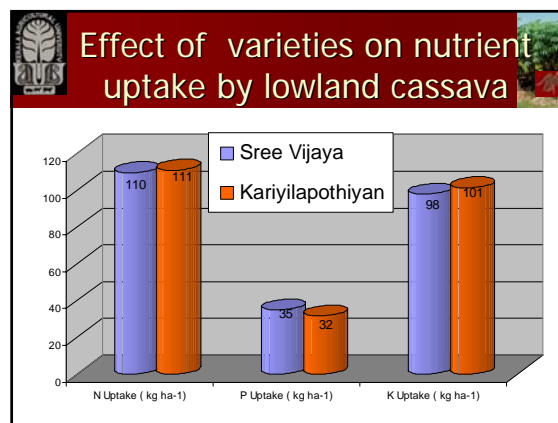
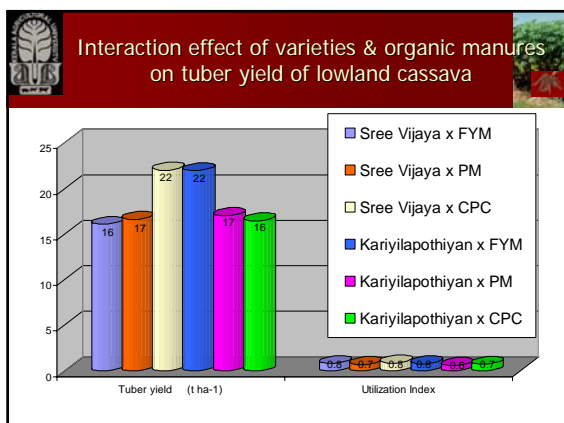
Treatments

- Sources of Organic Manure
 - Recommended dose (RD) as Farmyard manure (10 t ha⁻¹)
 - RD as Coirpith compost
 - ½ RD as Farmyard manure + ½ RD as Neem cake
 - ½ RD as Coirpith compost + ½ RD as Neem cake
- Doses of Organic manures on N equivalent basis
- Levels of Phosphorus - 30 and 60 kg P₂O₅ ha⁻¹
- With and without AMF inoculation

- Experimental design - 4x2x2 asymmetrical confounded factorial RBD
- Replications - 3
- Variety – Sree Dhara
- Uniform dose of 60 kg N and 100 kg K₂O ha⁻¹







CONCLUSION

Upland Coleus

- ✓ Farmyard manure – the best organic manure
- ✓ Partial substitution of FYM – ½ FYM + ½ Neem cake
- ✓ Full substitution of FYM – ½ CPC + ½ Neem cake

Lowland Cassava

- ✓ Poultry manure – the best organic manure
- ✓ Coirpith compost as an alternative to FYM

