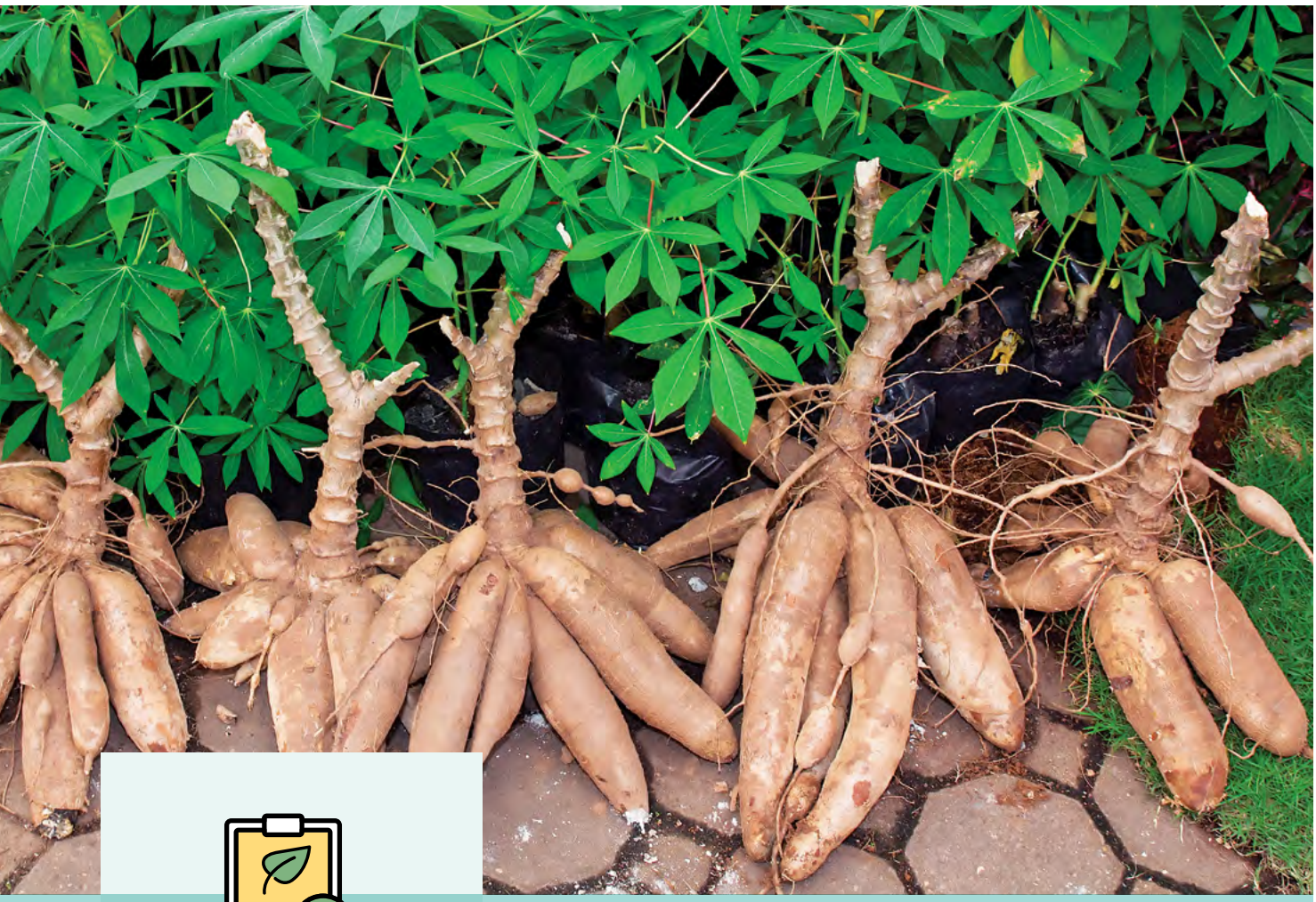


CFPN
trial

Effects of phosphorus (P) on yield of cassava storage roots

When	2014, 2015
Crop	Cassava (*Manihot esculenta*)
Soil type	60L pots with perlite
Where	Experimental greenhouse, Gilat Research Center, Israel
Measurements	Number of storage roots (NSR) Fresh and dry weight of storage roots P concentration in leaf blade

Objective

To determine the effect of fertigation-applied phosphorus (P) on cassava root growth and yield

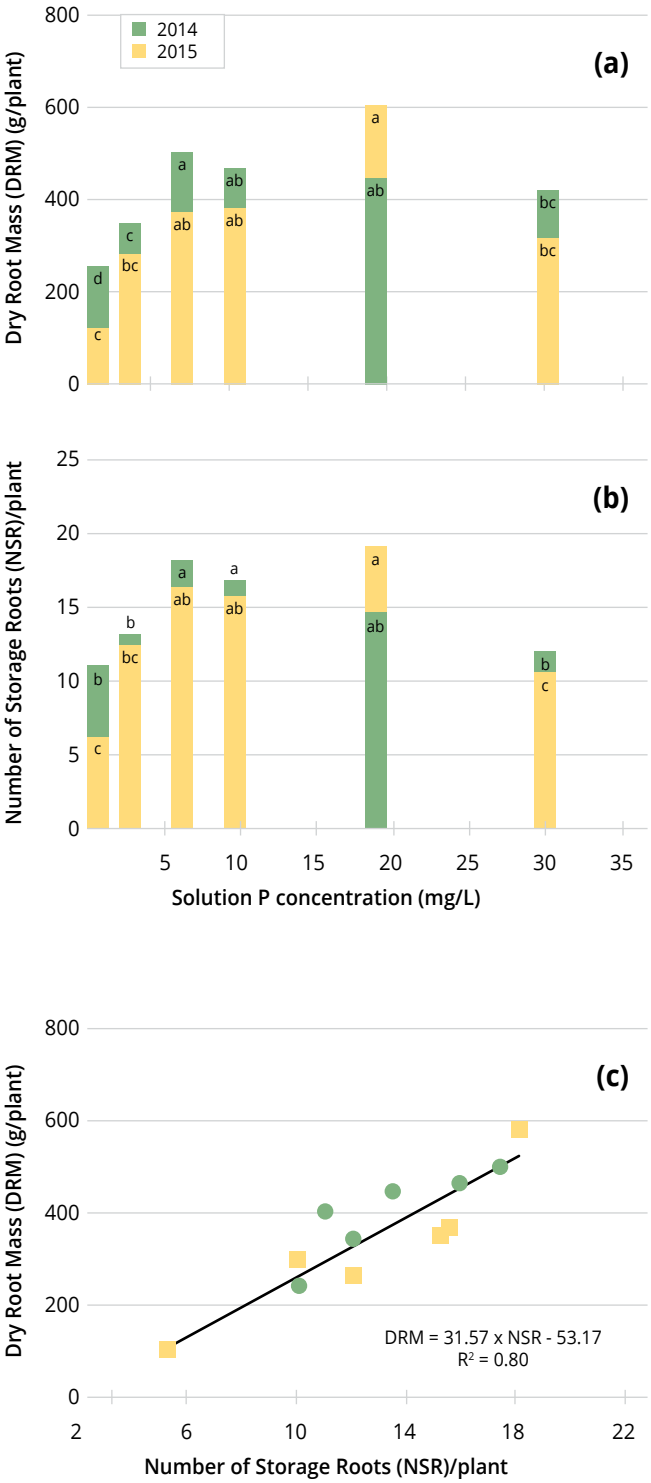
Treatments

Phosphorus solutions at 1, 4, 7, 10, 20 and 30 mg/L, were applied through manual irrigation. At 8L/week in the first 4 weeks after transplanting then increased by 1 L every week. Treatments were replicated four times in a completely randomized design.

Results

→ Higher levels of P led to increased number and size of storage roots (Fig. a and b)

→ Increased root yield is due to P improving adventitious and fibrous root numbers



Effect of solution P concentration on: (a) dry root mass and (b) number of storage roots per cassava plant. Means with different letters are significantly different at p<0.05, the difference is among treatments within the same year. (c) The relationship between the DRM and the NSR of cassava.

Further reading

John Okoth Omondi, Naftali Lazarovitch, Shimon Rachmilevitch & Uri Yermiyahu (2019) Phosphorus affects storage root yield of cassava through root numbers, Journal of Plant Nutrition, 42:17, 2070-2079, DOI: 10.1080/01904167.2019.1655033

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ARO and ICL initiative