

Rapid propagation of cassava in Thailand

Cassava is one of the most important crop of Thailand. The planting area are about 1.08 million ha.

The total production are 22.2 million tons.

The average yield are about 20.7 tons/ha.

For commercial planting, cassava multiply by stem cuttings.

Most of vegetative crops as cassava has a slow rate of propagation.

Cassava 12 months old plant give about 10 stem cuttings (usually 25 cm. long)

The problem of low multiplication ratio in cassava

1. Planting material are not enough for evaluation in several location trials.
 2. When the new varieties were released planting material are not enough for distribute to the farmers.
- To solve the problem, rapid propagation techniques cane be used

Rapid propagation method were done in Thailand.

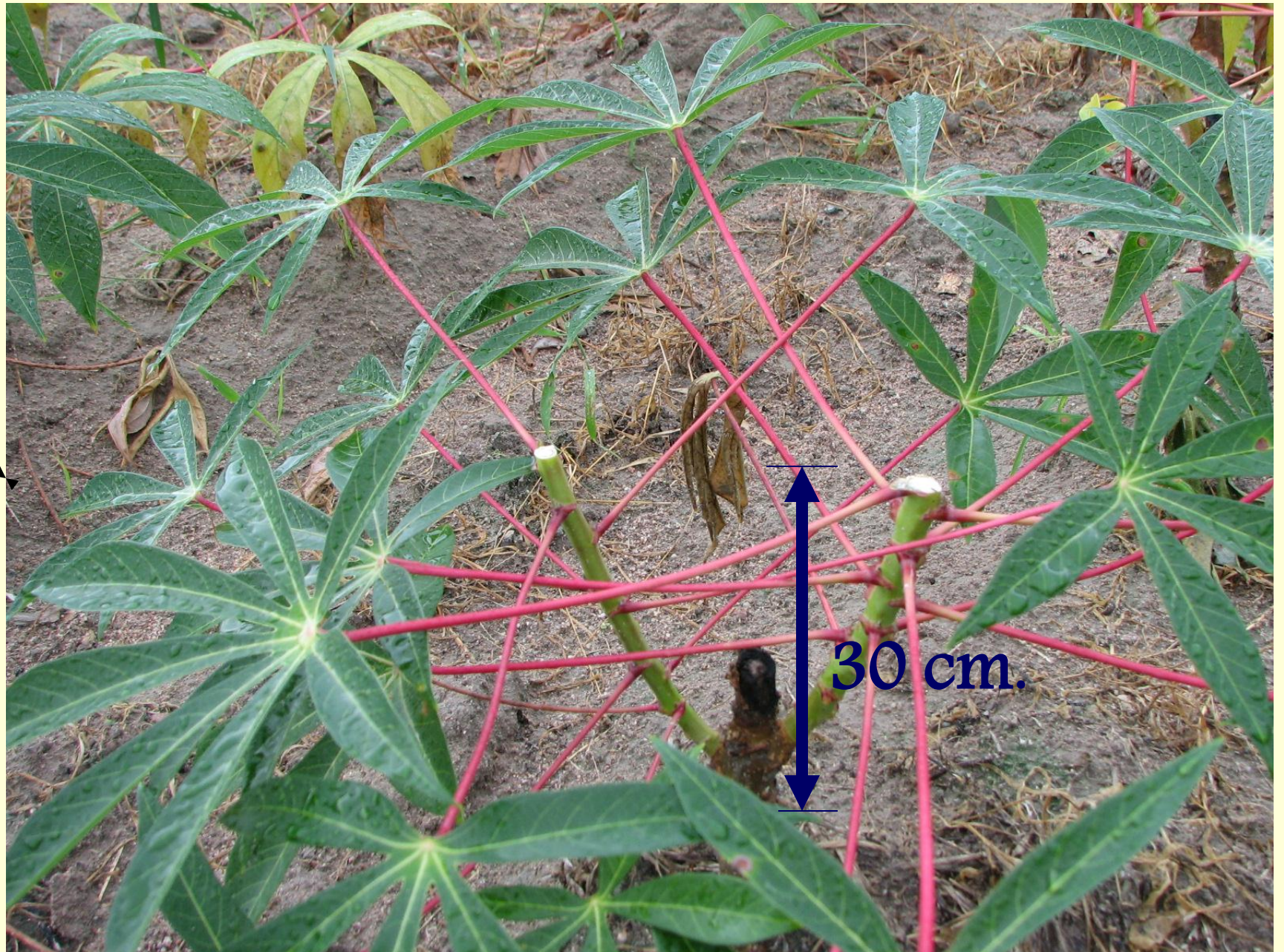
1. every simple method
2. easy to practice and
3. use small budget.

1. Tip shoot cutting

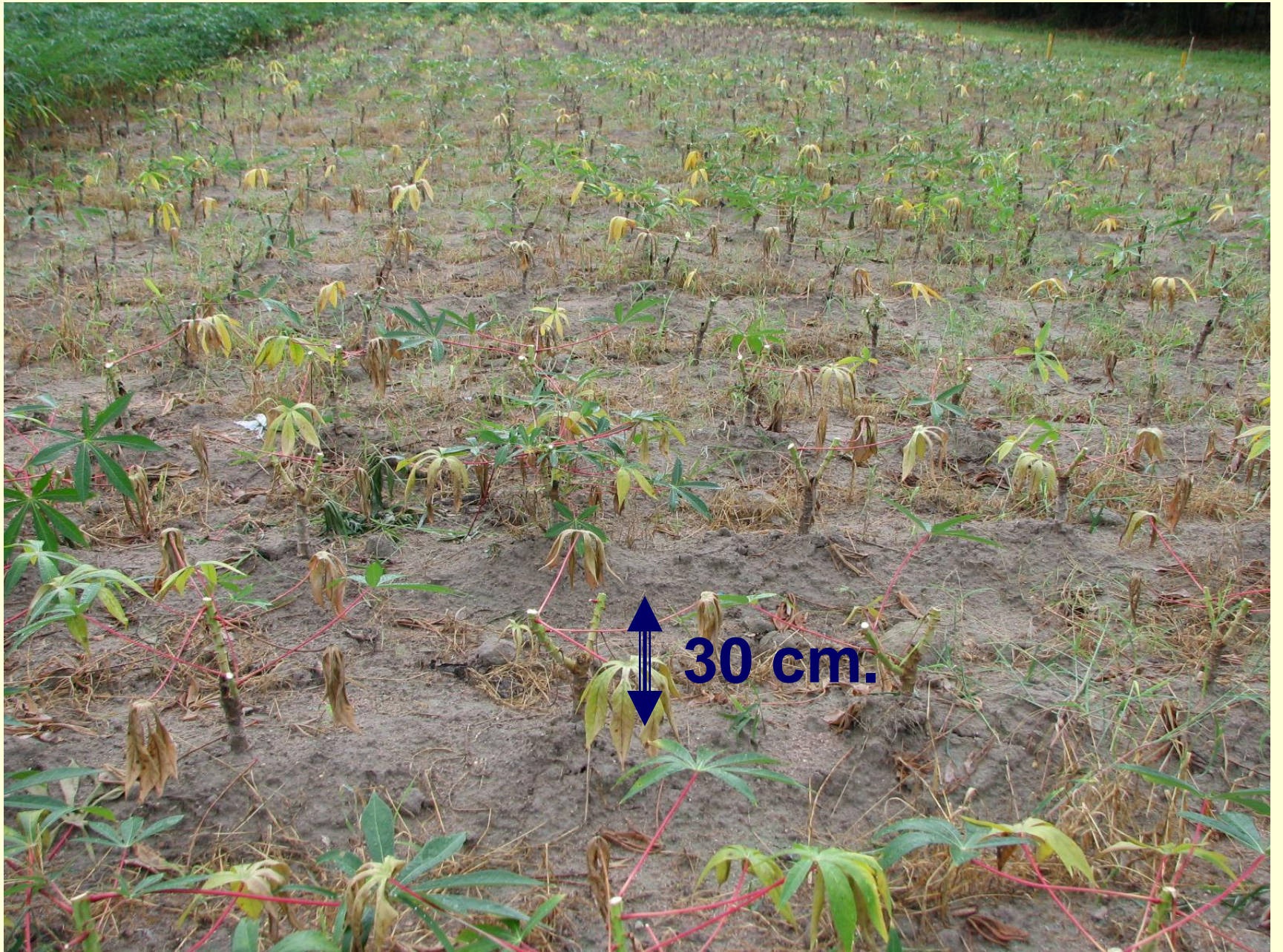
Normally planting cassava and after 2
month cutting the shoots







30 cm.











Compare multiplication rate

ORDINARY PLANTING

1 plant give 10 stem cuttings
(normal size 25 cm. long)



TIP SHOOT CUTTING

1 plant give 20 stem cuttings
(normal size 25 cm. long)

2. Short stem cutting

Stem cutting 3–5 cm. long and at least there are 2 nodes.



Materials and Method



Insecticide

Carbaryl 32 gm. ai. / 20 l. of water



Fungicide
Benomyl

10 gm. ai. / 20 l. of water

Media for planting



Ratio 1/3



Ratio 1/3



Ratio 1/3

Polythene bags 4 x 5 in.







minicutting 3-5 cm.long



Soaking mini stem cuttings in fungicide and insecticide suspension for 10 min.















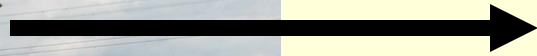








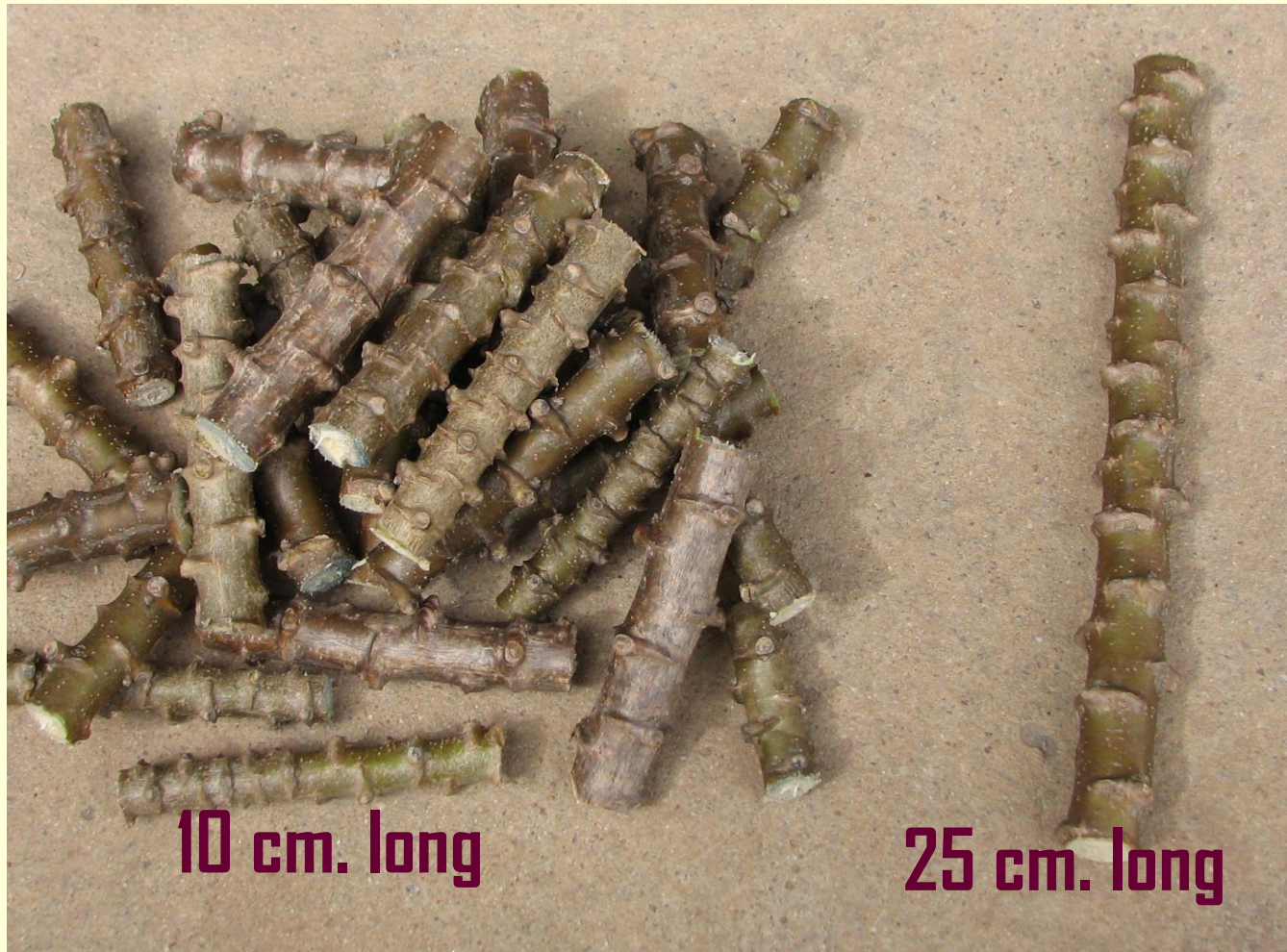
10 cutting
Normal size
20–25 cm.



50 minicutting
3–5 cm.



3. Short stem cuttings (10 cm. long) and young stem cuttings



4 months after planting





Young stems



Young stem cuttings (25 cm. long) soaking in fungicide and insecticide suspension





One week after planting





12 months after planting



Compare between 2 System

Normal system

1 mature plant

↓
10 plants

↓ 12 months

10 mature plants

↓
 $10 \times 10 = 100$ stem cuttings

Rapid system

1 mature plant

↓
25 plants

↓ 4 months

25x5 = 125 plants

↓ 12 months

125 mature plants

↓
125x10 = 1,250 stem cuttings

25 ratoon plants
↓
25x20 = 500 stem cuttings

↓
 $1,250 + 500 = 1,750$ stem cuttings