

## Malaysia: BioAktiv Works Well on Yam Bean



Fig. 1: BioAktiv-treated yam bean plants

**M**alaysia [6 June 2009]: BioAktiv was found to be effective on yam bean. It produced healthier plants and larger yams hence increased yield by about 30 percent.

### The Trial

A trial on the use of *BioAktiv for Plants* on yam bean<sup>1</sup> was carried out in a farming town Bidor in Malaysia. The root crop was sowed, two lines on a bed, on 30 January 2009. On 8 February<sup>2</sup>, about 40 g of BioAktiv was applied with a portable pump sprayer on four 125m-long beds (about 400 m<sup>2</sup>) of yam bean. The rest of about 20 beds served as control and without any BioAktiv treatment.



Fig. 2: Healthier and stronger seedlings of BioAktiv-treated bed (right) than those of non-treated bed (left).

One week later, the effects of BioAktiv – higher germination rate, and healthier stronger seedlings – were already visible (Fig. 2). Normal fertilisation and watering were applied both the treated and control beds. Another 40 g was applied on 24 May about two weeks<sup>3</sup> before harvest on 6 June.

### Higher Yield

About 22 m of two test beds and two control beds were harvested for yield comparison. Despite both the applications of BioAktiv were late (see footnotes), the trial produced good results. The two test beds produced four full wheelbarrows of yams (Fig. 3), while the control beds produced only three with the last one not full. Besides producing more yams due to higher germination rate, yams from BioAktiv beds were larger and more even sizes with lesser low-grade (too small or oddly shaped) yams than control beds (Fig. 4).



Fig. 3: Wheelbarrow full of BioAktiv yams



Fig. 4: BioAktiv beds produced more evenly larger yams (right) than control beds (left)

<sup>1</sup> Known locally as sengkung or mengkuang, also elsewhere as Chinese turnip and jicama

<sup>2</sup> First application should be before sowing

<sup>3</sup> Treatment should be a month before harvest



### Healthier Plants

The farmer Mrs. Hoong also reported that BioAktiv-treated yam bean plants have healthier and stronger vines, leaves and roots. Non-treated plants frequently had diseased lumps in their roots while BioAktiv plants did not (see Fig. 5). With these diseased lumps in yam bean roots, Mrs. Hoong said that she would have to plant something else such as sweet potato in the following season to avoid the disease persisting and affecting productivity.



Fig. 5: BioAktiv yams with good roots (top), control yams with diseased lumps (middle), a closer look at the diseased lumps (bottom)

### ROI > 30 Times

The following calculations are based on data from the trial.

- Estimated total yield of four BioAktiv beds = 3,800 kg<sup>4</sup>
- Estimated total yield of four control beds (assuming only 10% lesser) = 3,420 kg
- Extra produce for sales = 380 kg
- Extra income (assuming selling price of RM0.70 per kg) = RM266.00
- BioAktiv applied = 80 g
- Investment on BioAktiv (assuming retail price of RM100 per kg) = RM8.00
- Return on investment (ROI) = (266-8)/8 > 30 times

### Conclusions

As with applications on many other crops in many other territories, the trial in Bidor clearly indicated that *BioAktiv for Plants* works effectively on yam bean. It is found that BioAktiv provided:

- Higher germination rate
- Healthier vines and leaves
- Healthier roots without disease
- Larger yams of more even sizes
- Higher yield (about 30 percent)
- ROI of more than 30 times (based on 10 percent higher yield)



Fig 6: BioAktiv-treated rows with produce

<sup>4</sup> Two 22m lengths of BioAktiv beds produce four wheelbarrow-full of yams, each wheelbarrow-full weighs 84 kg; Four 125m BioAktiv beds produce: 4 wheelbarrow-full / 44 m x 125 m x 4 beds x 84 kg = 3,818 kg  $\cong$  3,800 kg