

An integrated approach towards productivity improvement in black pepper: Sri Lankan experiences

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Introduction

- ❑ Sri Lankan share in the global market is 2-3%
- ❑ A possibility is there to increase this share owing to high intrinsic quality
- ❑ Since land is a limiting factor, increase of the productivity of the existing cultivations is feasible
- ❑ Total pepper extent is 30931 Ha and export volume is 12218 Mt in 2010

Past programs to expand pepper and popularize fertilizer usage

- ❑ The Department of Export Agriculture (DEA) is the formal government body to improve pepper sector
- ❑ Early attention was to expand pepper extent through assistance schemes (1986 and 1987)



Past programs to expand pepper and popularize fertilizer usage cont..

- ❑ Homegarden assistance scheme offered 200 free plants, Rs. 5 for successful plant, in 1995
- ❑ Mid 90s fertilizer given on cost sharing basis (1st year 50%, 2nd year 25%)
- ❑ In 90s pilot program on soil conservation was carried out in Kandy, Matale, Kegalle and Badulle Districts



Programs on integrated nutrient management

- ☐ Plantation advisory service (from 2000)
- ☐ Organic manure production program
- ☐ Integrated fertility management demonstrations
- ☐ Productivity Improvement Program (PIP)
- ☐ One-crop – one-village program



Programs on integrated nutrient management cont...

- ☐ Organic manure production program
 - Rs. 200/ 50 feet³ unit/ 0.25 ac
 - Rs. 800/ 4 units/ ac





Programs on integrated nutrient management cont...

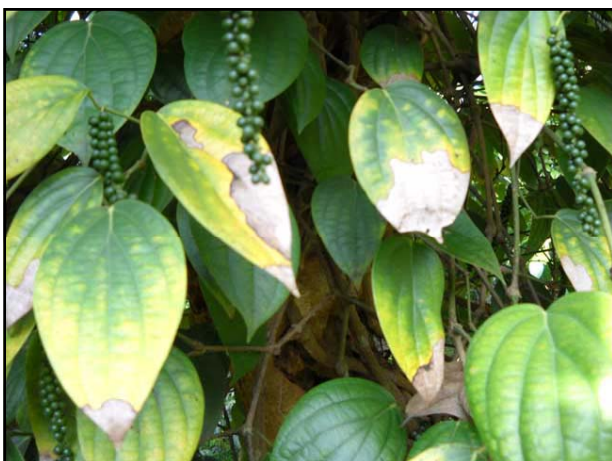
- ❑ Integrated fertility management demonstrations
 - Started in 2008 and continued to 2011
 - Rs. 28000/ one acre pepper block for establishment of live-fence, shade control, compost production and inorganic fertilizer
 - Paid in three installments (1st 12000, 2nd 8000, 3rd 8000)

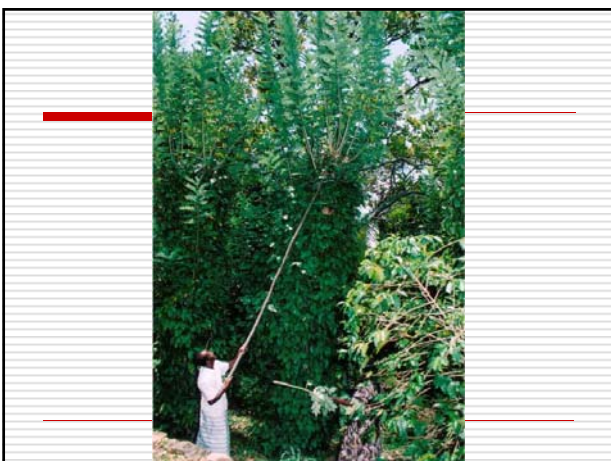
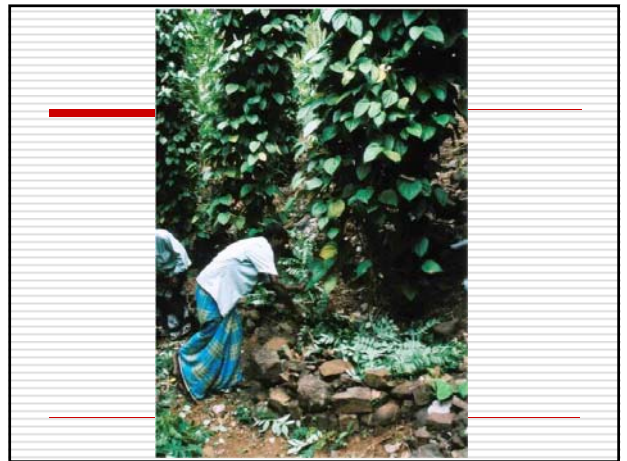
Programs on integrated nutrient management cont...

- ❑ Productivity Improvement Program (PIP)
 - For uplifting production of the existing pepper plantations by three-fold
 - Packages of practices recommended and have to be fulfilled
 - Rs 20000/ Ha, paid on three installments on yearly basis
 - ❑ 1st 10000
 - ❑ 2nd 5000
 - ❑ 3rd 5000

Programs on integrated nutrient management cont...

- ❑ Productivity Improvement Program (PIP)
 - Package of practices to be fulfilled
 - ❑ Soil and moisture conservation
 - ❑ Gap filling
 - ❑ Shade manipulation
 - ❑ Weed control
 - ❑ Training and pruning of pepper vines
 - ❑ Adoption of integrated nutrient management practices and integrated pest control measures (non-chemical)







Programs on integrated nutrient management cont...

□ Productivity Improvement Program (PIP)

- Other maintenance activities expected
 - Removal of hanging vines and basal runners
 - Control of earth-loosening ants by non-chemical measures
 - Improve soil drainage
 - Binding of vines after harvesting



Basal runners



Outcome of integrated nutrient management programs

- ❑ Pepper production has increased by 88% in 20s over 90s
- ❑ Focus in 19s to expansion of cultivation, in 20 s productivity improvement in existing cultivation
- ❑ Pepper production in latter half (2006-2010) was 38% more than early half

Table 1.
The extent of pepper developed by new planting program and the Productivity Improvement Program, estimated total production from 2004 to 2010 and percentage increase of total production as against 2001 total production

Year	Extent of pepper developed through PIP (Ha)	Extent of pepper developed through new planting program (Ha)	Estimated total production (Mt)	Percentage increase of total production as against 2001 production
2004	456.6	677.8	12020	30.0
2005	1444.0	738.9	14270	54.2
2006	646.0	408.0	14440	56.1
2007	702.6	462.8	10377	77.1
2008	1212.0	755.2	12897	39.4
2009	829.2	571.0	15767	70.5
2010	843.4	727.7	17332	87.4
Total	6133.8	4341.4	97103	

(Source: Administration Reports of the Department of Export Agriculture, Sri Lanka)

Outcome of integrated nutrient management programs cont...

- ❑ Developed 41% more by PIP in comparison to new planting
 - ❑ Yield increases may be attributed to effort taken by DEA on integrated fertility management in pepper
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Thank you
