

National Webinar on Spice Improvement, Processing and Marketing & Poster competition

Production potential of pepper-An AEU wise analysis of yields realized in Kollam district, Kerala

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Introduction

Pepper or black gold spice (*Piper nigrum*) has earned Kerala trans-national fame. It is one of the most ancient and traditional spice crops of India which has been produced and traded worldwide. Endemic to the western ghats, the crop is commercially grown throughout the state in an area of 0.86 lakh ha with a production of 0.42 lakh tonne. However, significant differences exists in the yields, district wise and agroecological unit (AEU) wise. Idukki and Wayanad are the two major pepper producer districts in Kerala. The other states include Karnataka and Kanyakumari and Dindigul districts in Tamil Nadu. The economic life of black pepper is 20 years and the yield of the vines start declining after about 20 years of regular bearing (Ratishmon and Scaria, 2019),

The study was conducted to analyse the yields of the best farmer managed fields based soil properties and nutrient contents in the leaf tissues

Methodology

Three farmer fields in AEU 3, 9 and 12 in Kollam district were selected based on the recommendations from the Department of Agriculture Development and Farmers' Welfare. Soil samples and tissue samples from the pepper fields were collected and analysed for the nutrient contents, the management practices adopted by the farmers were documented through a personal interview schedule and field visits.

Literature cited\

- Ratishmon, A.V., and Scaria, R. 2019. *International Journal of Advanced Research in Commerce, Management and Social Science*. 2(2): 35-42.

Results

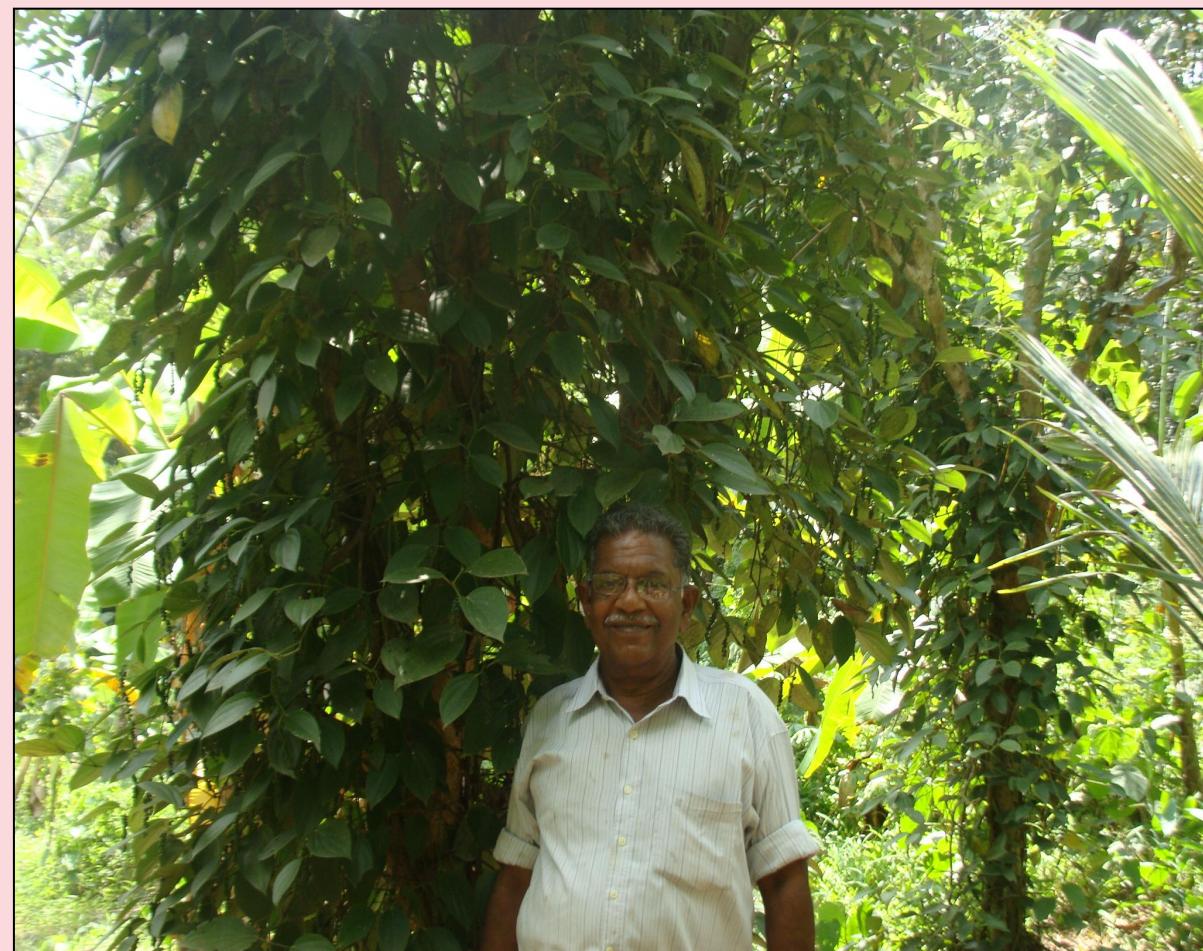
*Soil test data based liming and fertilizer application including $MgSO_4$ application, irrigation and prophylactic measures of Bordeaux mixture drenching and use of Trichoderma prior to the onset of monsoon to curb the incidence of quick wilt in the plantation, influenced the productivity.

*The nutrient contents in the index indicated the sufficiency in tissues

* Climate of the foothills, a tropical humid monsoon with a short dry period of 2.5 months was favourable for higher production potential in AEU 12 compared to that in AEU 9 and 1.

Table 1. Results of soil sample and tissue sample analysis

Soil analysis				Plant analysis			
Parameters	AEU1	AEU9	AEU 12	Contents	AEU1	AEU9	AEU 12
pH	5.76	6.04	4.3	N%	3.172	3.452	3.825
OC (%)	0.72	0.63	0.89	P%	0.182	0.061	0.194
EC (mhos/cm)	0.06	0.74	0.2	K%	3.43	2.39	3.48
N (kg/ha)	564.48	548.8	567.5	Ca %	1.9	1.44	1.28
P(kg/ha)	133.65	57.51	12.46	Mg%	8.40	7.2	10.8
K(kg/ha)	283.26	280.75	313.82	S%	0.182	0.151	0.174
Ca (ppm)	225	370	250	Fe ppm	475	577	297
Mg(ppm)	70	90	156	Mn ppm	340	284	380
S(ppm)	18.5	24.5	22.5	Zn ppm	46	55	22
Fe(ppm)	7.12	81.8	92.4	Cu ppm	25	25	20
Cu(ppm)	1.92	4.0	3.1	B ppm	35.5	29.4	28.7
Zn(ppm)	5.50	5.4	4.8	Yield (kg /ha)	187	208	468
Mn(ppm)	25.13	65.7	51.4				
B (ppm)	0.21	0.32	0.14				



Acknowledgments

We acknowledge Kerala Agricultural University for all the facilities and services rendered during the course of the work

