

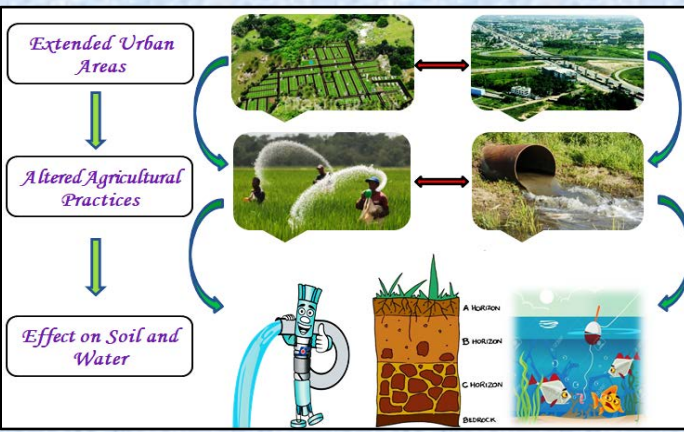
# Organic Carbon and Micronutrients Distribution in Agricultural Systems along Rural-Urban Interface of Southern Transect of Bangalore



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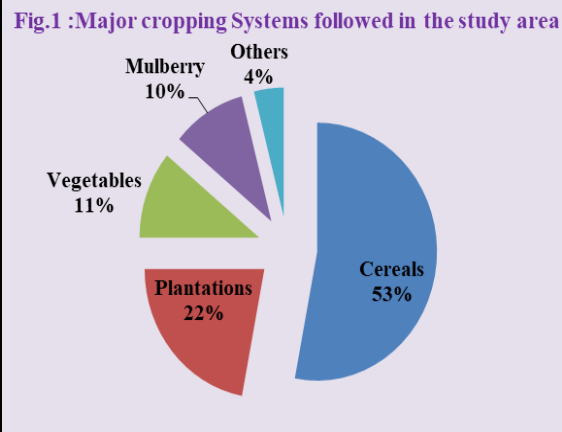


Study Area at Southern Transect of Bangalore, India

- Study area is divided into Urban, Transition and Rural area as per the Survey Stratification Index (Ellen *et al.*, 2017)
- SSI ; Urban areas: 1-2, Transition: 3-4, Rural:5-6
- The major cropping systems were identified and grouped into cereals, plantations, vegetables and mulberry
- 100 soil samples from 25 villages were collected from each urbanization gradient

**Tab. 1: Organic Carbon and Micronutrient content across Rural-Urban Interface of Bangalore**

Urbanisation Gradient	pH	EC	OC	Zn	Cu	B	Mn	Fe
		ds <sup>m-1</sup>	%	ppm				
Urban	7.60	1.71	0.43	0.49	0.43	0.51	3.63	4.10
Transition	6.01	0.50	0.54	0.43	0.67	0.61	8.68	12.70
Rural	6.80	0.41	0.69	0.62	0.62	0.81	5.76	7.60
SEM±	0.14	0.26	0.02	0.04	0.03	0.02	0.11	0.39
LSD@0.05%	0.57	1.00	0.08	0.14	0.13	0.09	0.44	1.54



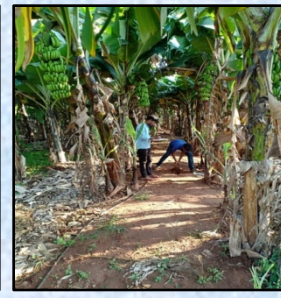
**Tab. 2: Nutrient Index Range for Organic Carbon and Micronutrients across Rural-Urban Interface of Bangalore**

Parameters	Urban	Transition	Rural
OC	Low (1.41)	Med (1.67)	Med (2.11)
Zn	Low (1.27)	Low (1.20)	Low (1.44)
Cu	Low (1.54)	Med (2.03)	Med (2.06)
B	Low (1.47)	Med (1.69)	Med (2.03)
Mn	Low (1.25)	High (2.36)	Med (1.81)
Fe	Low (1.18)	High (2.42)	Med (1.88)

\*Values in parenthesis represent Nutrient Index

**Tab. 3: Organic Carbon and Micronutrient content among different cropping systems**

Cropping systems	pH	EC	OC	Zn	Cu	B	Mn	Fe
		ds <sup>m-1</sup>	%	ppm				
Cereals	6.26	0.44	0.71	0.70	0.67	0.89	7.77	10.84
Plantations	6.45	0.46	0.54	0.48	0.62	0.62	5.95	8.05
Vegetables	6.31	0.47	0.57	0.39	0.63	0.69	8.09	11.58
Mulberry	6.44	0.46	0.63	0.53	0.67	0.68	7.08	10.12
SEM±	0.24	0.08	0.03	0.04	0.04	0.03	0.50	0.69
LSD@0.05%	0.74	0.24	0.08	0.12	0.13	0.09	1.55	2.15



**Summary/Conclusion**

- Organic Carbon and Micronutrient content of agricultural systems tend to deplete along urbanization.
- Nutrient Index of urban soils found low.
- Zinc is most deficient nutrient in all soils of study area.
- Conventional crops helps to sustain Organic Carbon and Micronutrients in agricultural lands.