Manure Application Negatively Affected Arbuscular Mycorrhizal Fungal Diversity on Enset (*Ensete ventricosum*) Roots in Ethiopia

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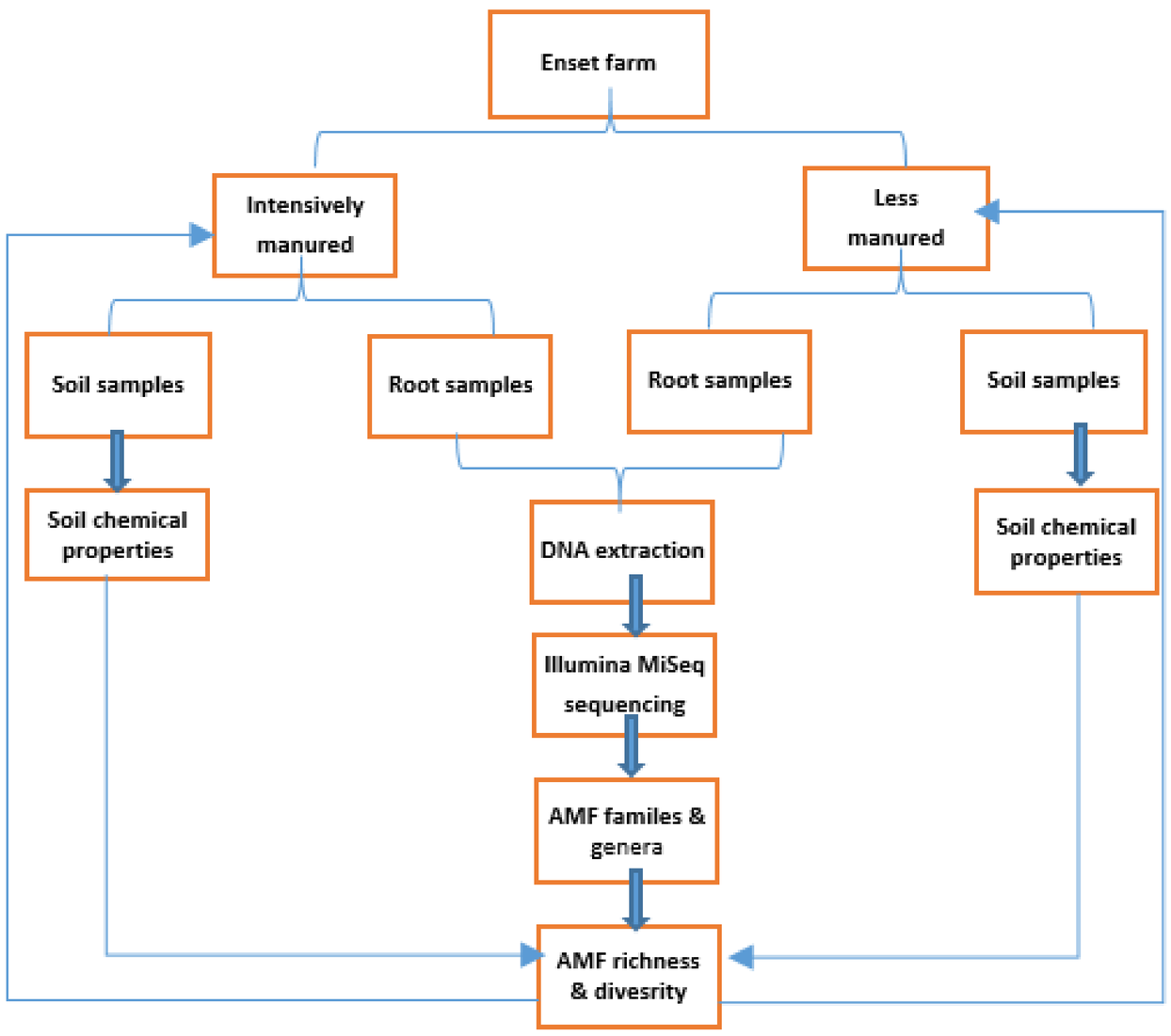
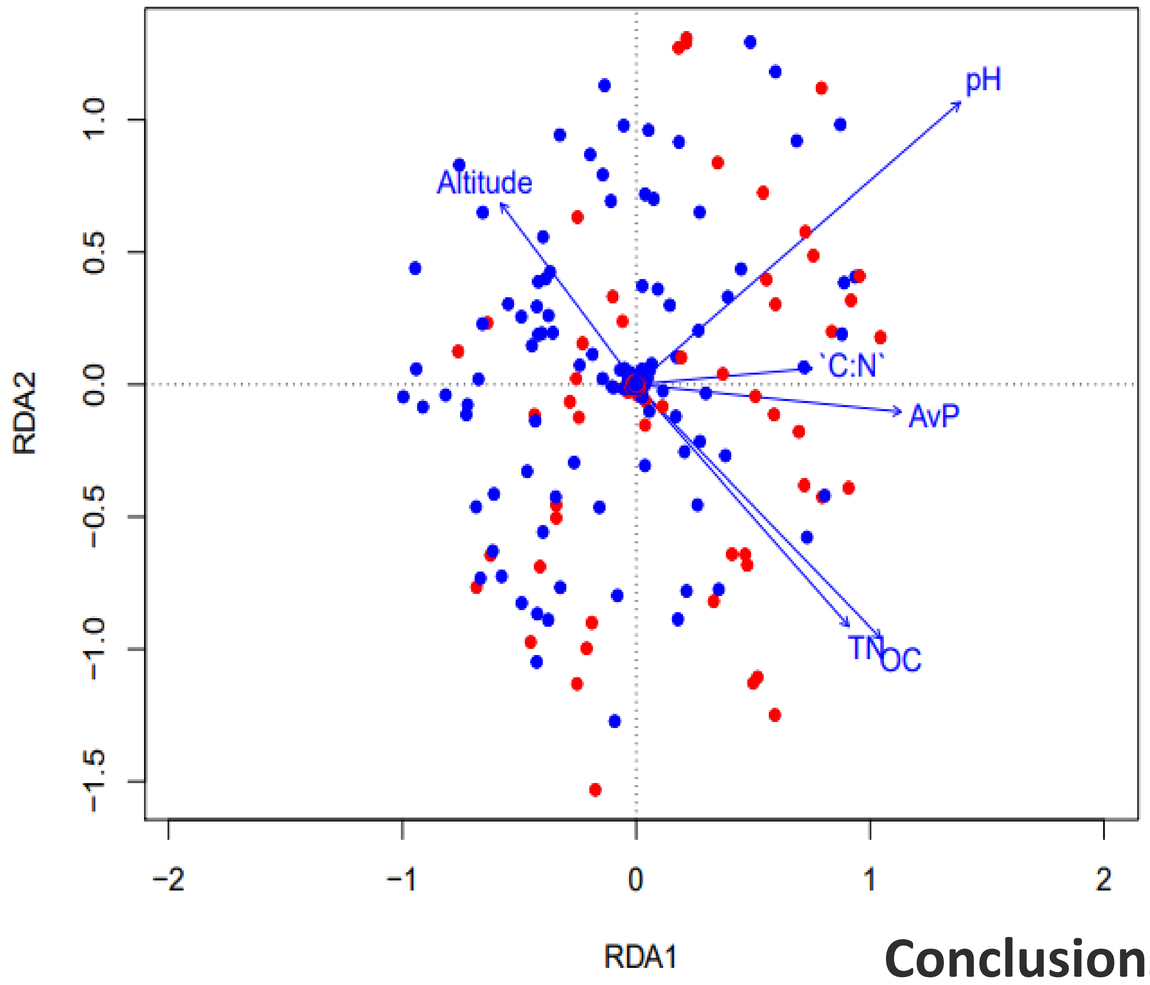
Introduction

- ✓ Enset (*Ensete ventricosum*m) is domesticated only in Ethiopia
- ✓ Belongs to Musaceae family
- ✓ About 20 million people
- ✓ Manure is the most common source of soil nutrients
- ▪ Arbuscular mycorrhizal fungi (AMF) are important soil MO
- ▪ AMF symbiosis is a win-win scenario
- ▪ Low AMF richness and diversity may provide limited services
- ▪ No available reports on the effects of manure on AMF

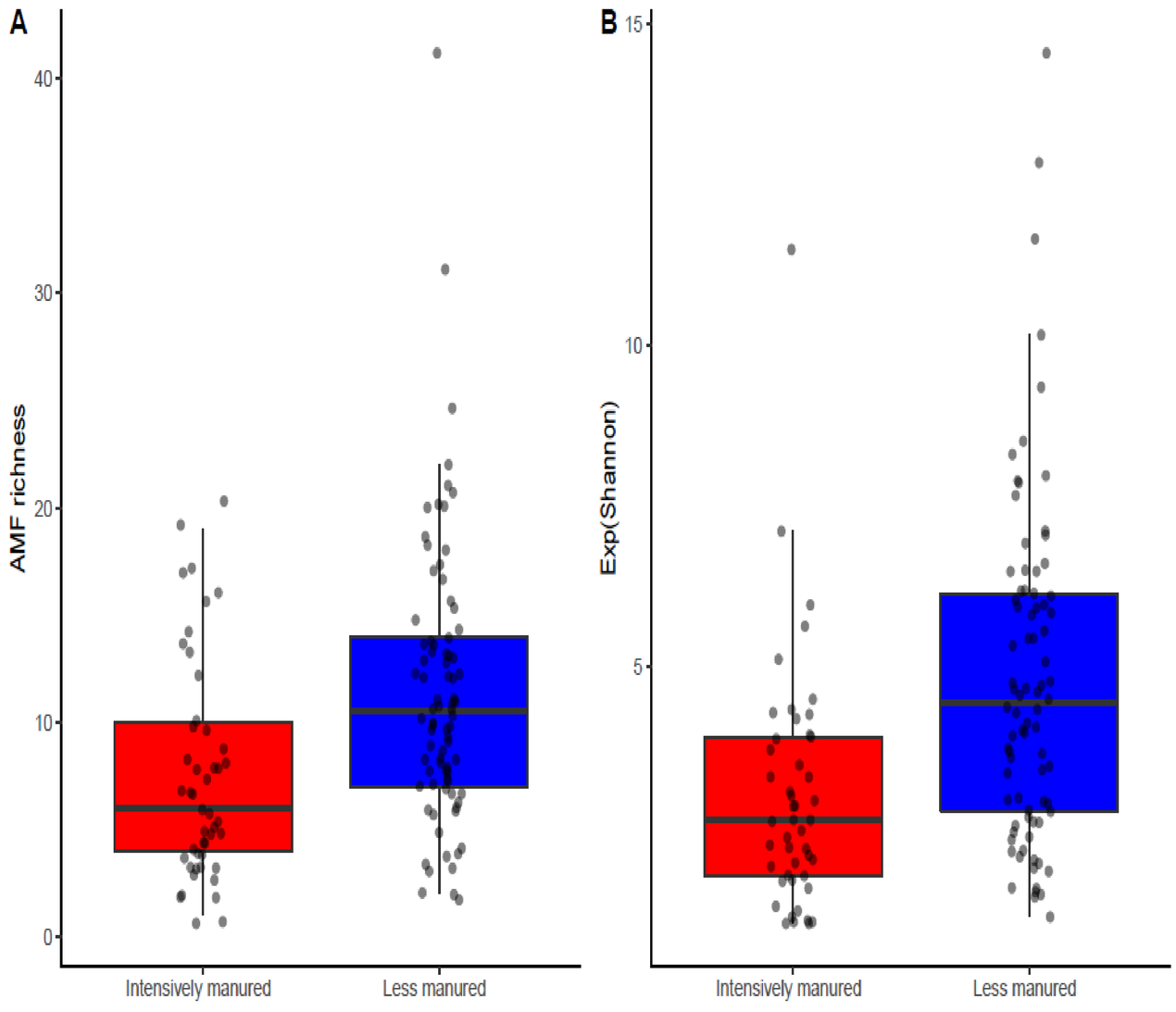
Materials and methods





Results

S/N	Identified AMF families	% OTUs
1	Glomeraceae	67.11
2	Claroideoglomeraceae	11.41
3	Diversisporaceae	6.70
4	Acaulosporaceae	6.04
5	Gigasporaceae	4.03
6	Paraglomeraceae	2.69
7	Scutellosporaceae	1.34
8	Pacisporaceae	0.79



Conclusions

manure application:

- ➢ Increased nutrient availability and SOC
- ➢ Decreased AMF richness and diversity
- ➢ Shifted AMF community composition
- ➢ Unexpectedly SOC and TN explained large variations than AvP