



Management strategies to manipulate soil biodiversity in relation to the ecosystem service disease suppressiveness

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Background

- arable farming soils are used more intensively than ever before and thus soil health (suppressive soils) becomes more important

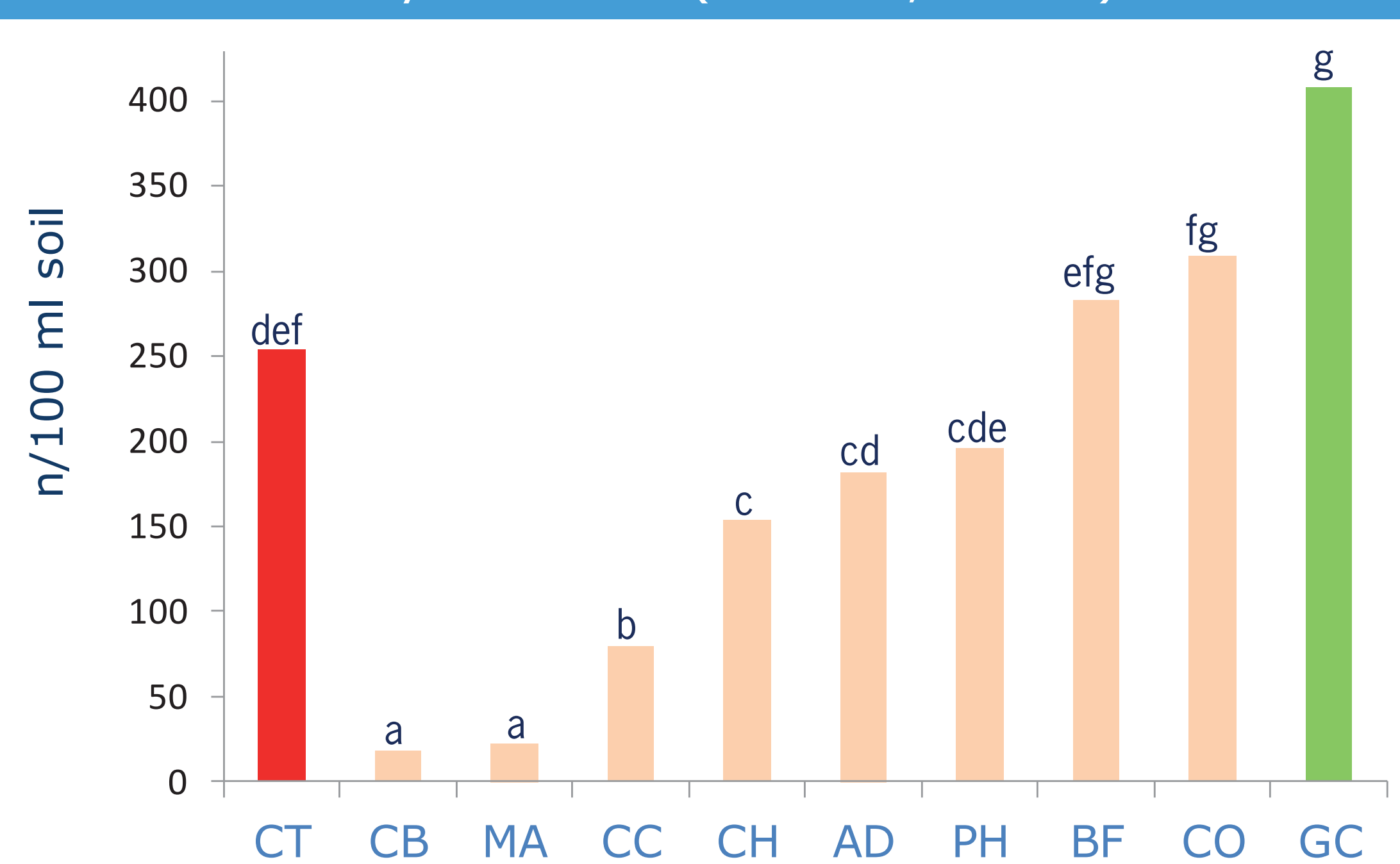
Material & Methods

- 10 different soil treatments have been applied (2006 and 2009) within an organic (ORG) as well as conventional (CNV) system to promote soil health
- This within a crop rotation of wheat/barley (2006, 2009), potato (2007/2010), lily (2008) carrot (2011) and corn (2012-2013)
- Korthals G.W., et al. Applied Soil Ecology 76 (2014) 112– 12

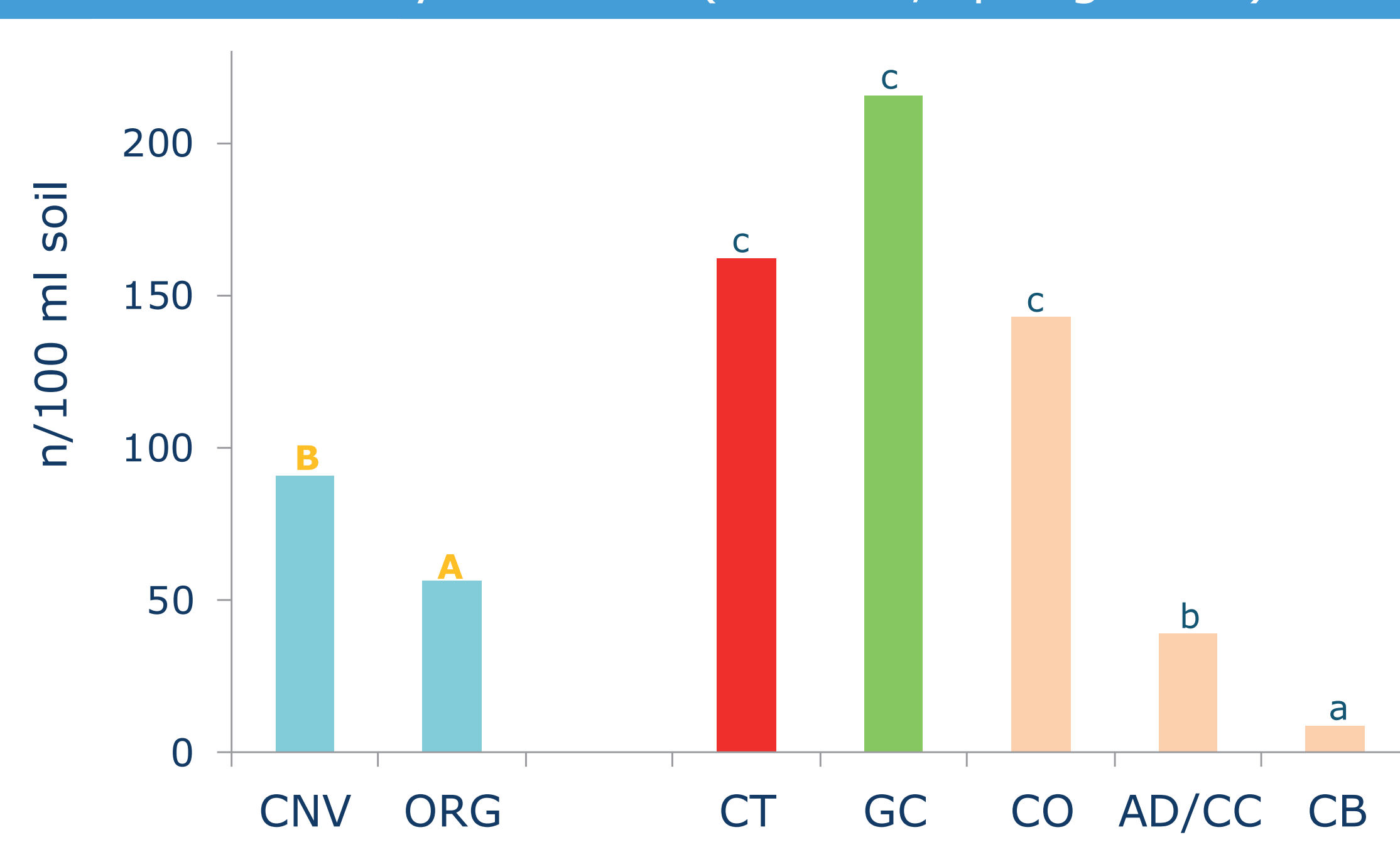
Results



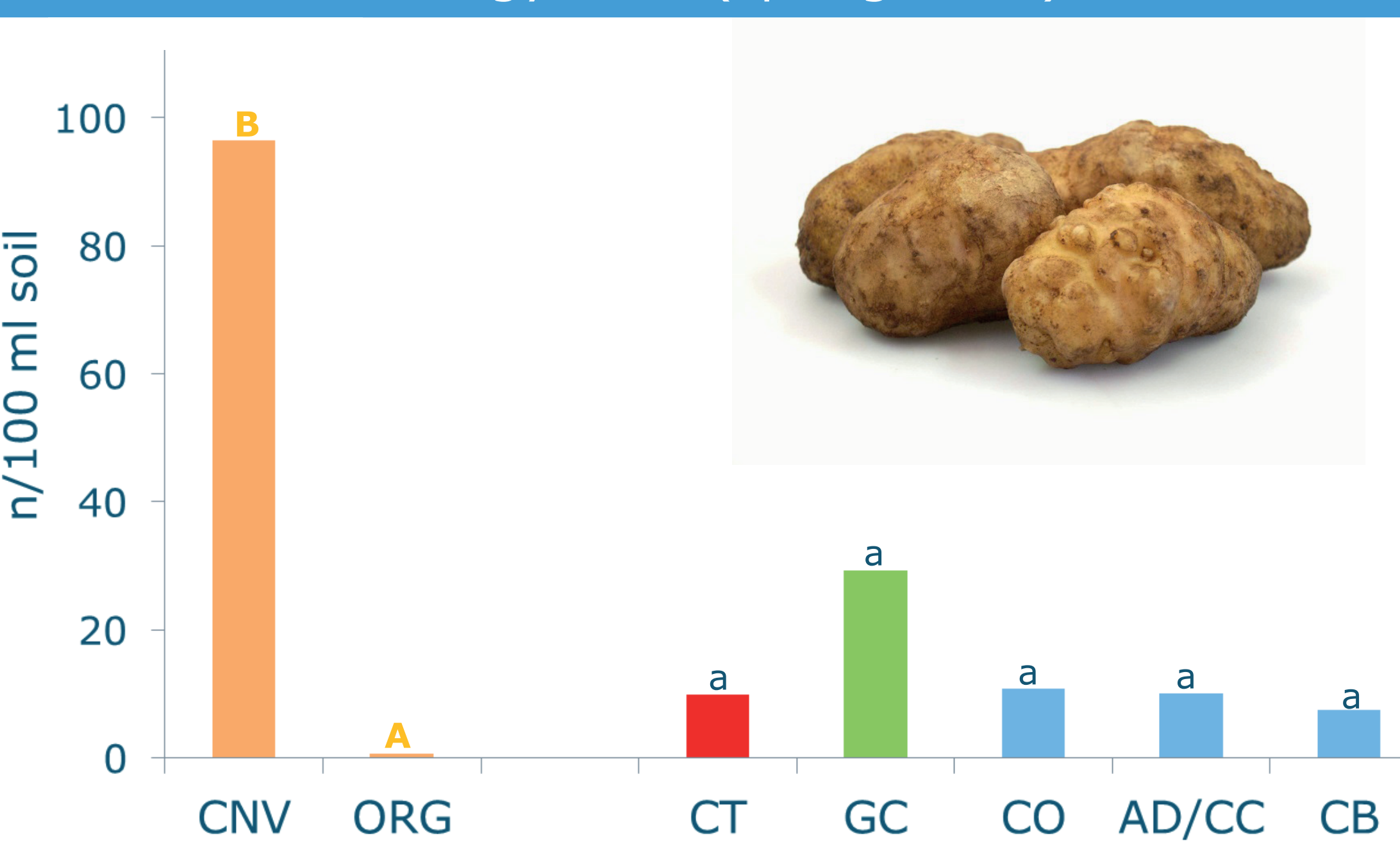
Effects on Pratylenchidae (CNV-GP, 07-11)



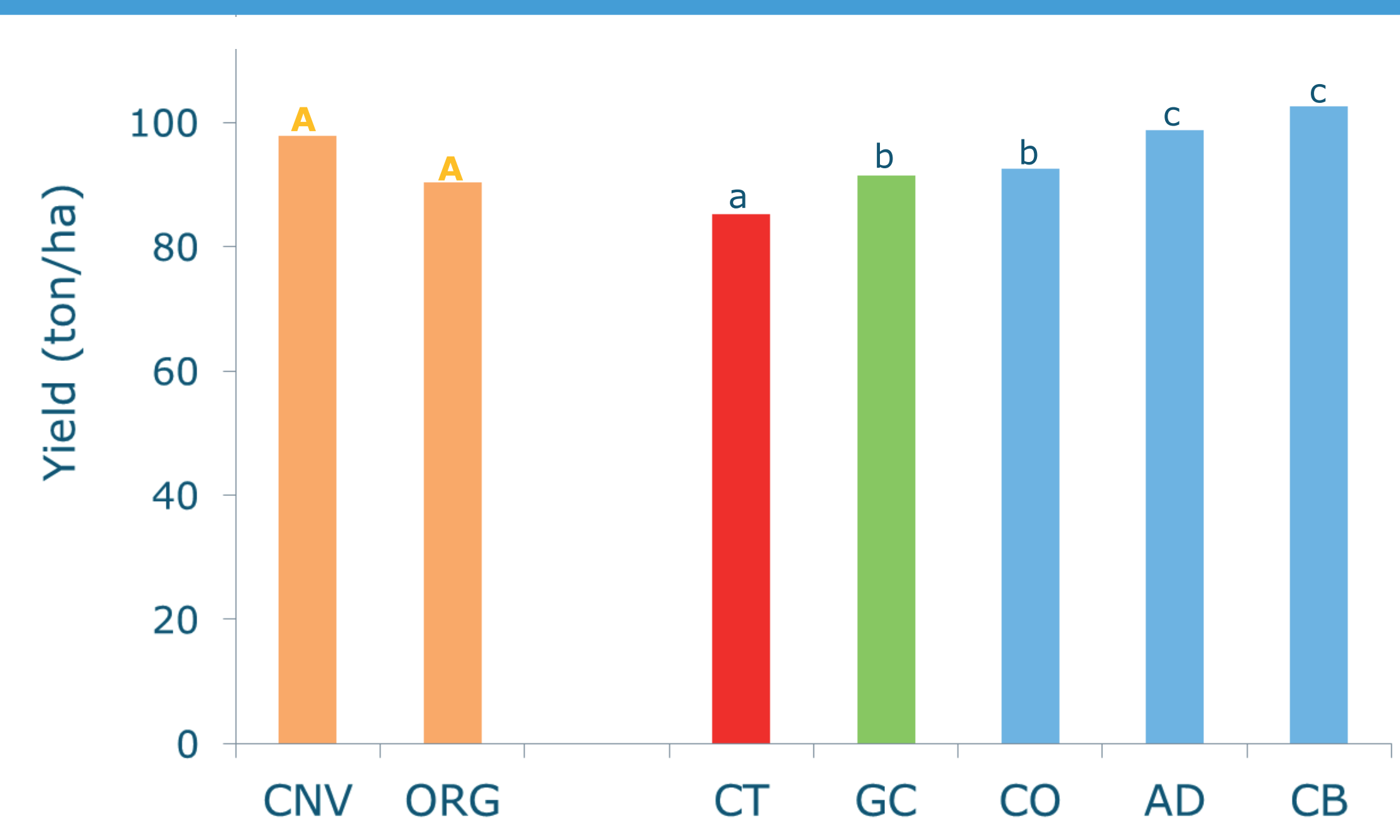
Effects on Pratylenchidae (CNV-GP, spring 2011)



Effects on Meloidogynidae (spring 2011)



Effects on yield of carrot (2011)



Conclusion

The present study demonstrates that in comparison to chemical control, additions of chitin, anaerobic soil disinfestation and marigold are excellent alternatives to improve disease suppressiveness and that some of these treatments performed better in the organic farming systems.