

# Early Blight:

## Influence of different varieties



J. Leiminger, H. Hausladen



## Early blight - review 2006

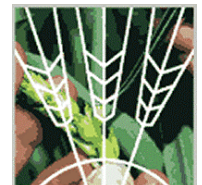


- Increasing diseases of early blight in Germany and also in Europe
- nationwide monitoring documents rising occurrence of early blight
- Disease with significant yield losses; Germany 30%
- First early blight symptoms in june
- Slowly epidemic development of early blight due to hot temperatures in june and july with very low moisture and rainfall
- Strong increase of early and late blight during august



# material and methods

- field trails with 8 potato varieties within different maturity groups
  - early :           Karlana (S), Marabell (S)
  - medium:         Solara (S), Agria (S), Albatros (W)
  - late:             Logo (W), Maxilla (W), Kuras (W)
- weekly fungicide treatments
- trials:
  - control, Coverspray, Mancozeb (Max), Amistar-Shirlan (Max)
- weekly ratings done on single plants
- estimation of yield, starch content and tuber sortation



# material and methods

rating:

- weekly rating of the necrotic leaf area

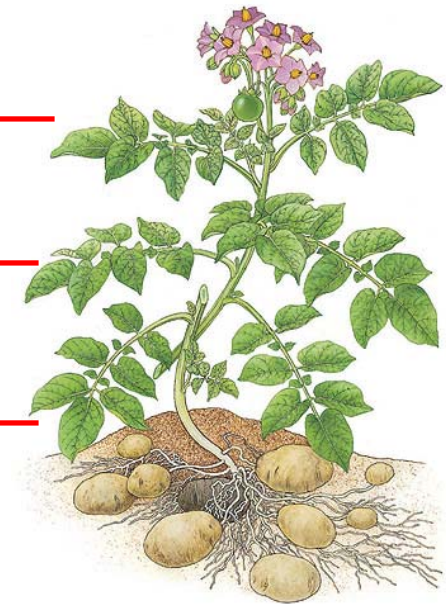
Upper leaf level



Main/middle leaf level



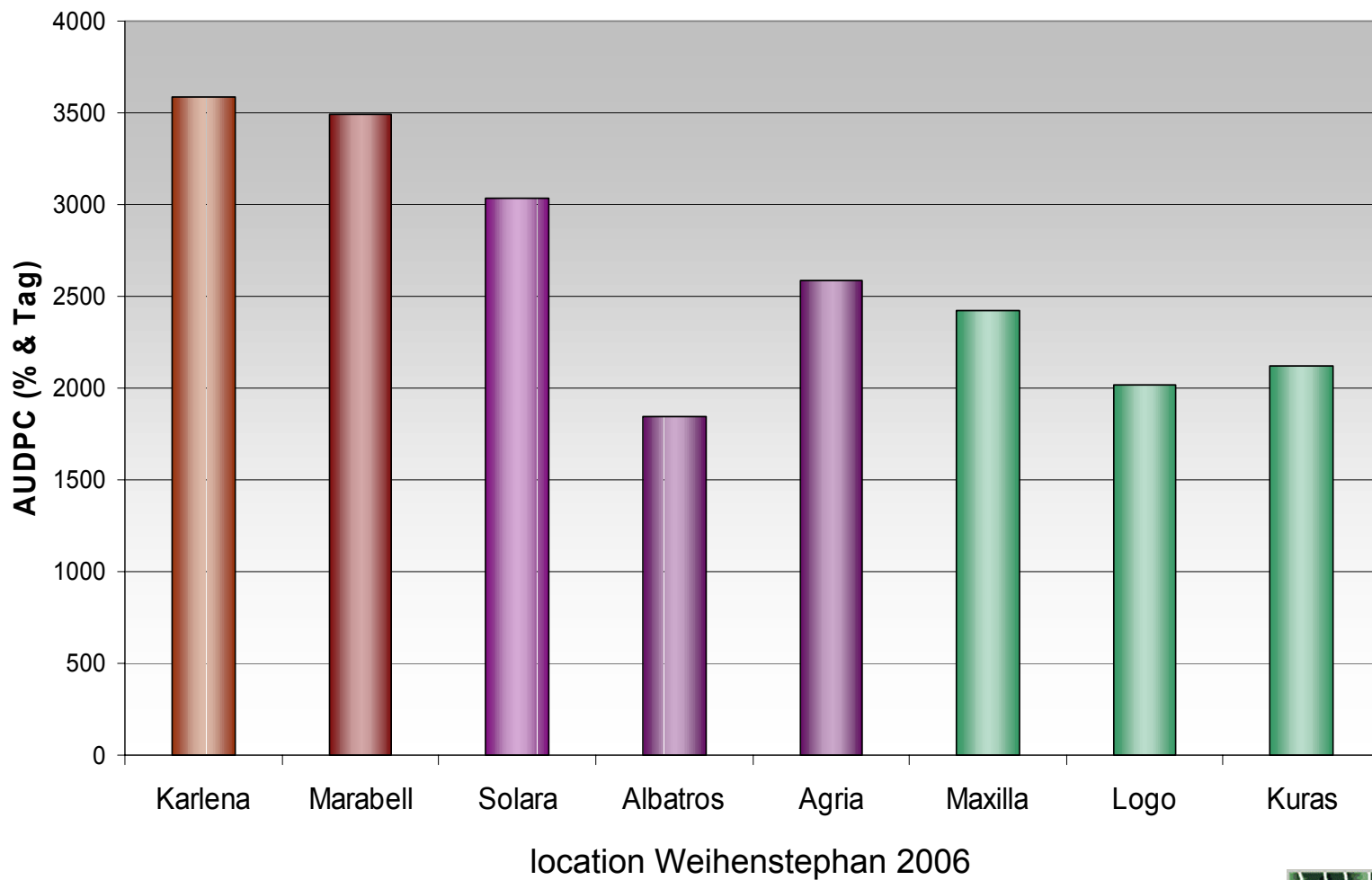
Lower leaf level



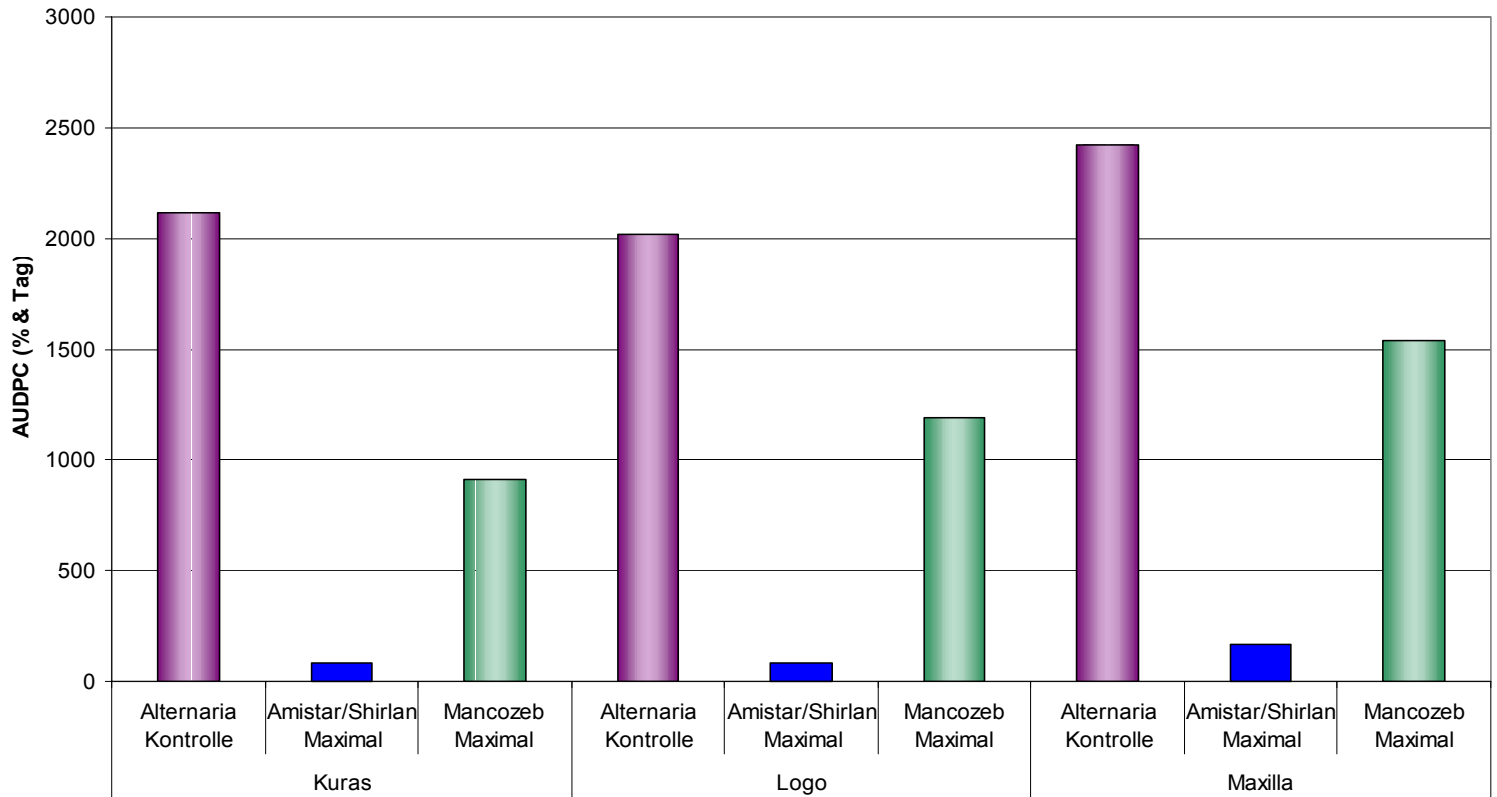
- rating of: early blight, late blight,  
total necrosis: unspezifische Necrose, Seneszenz,
- 10 plants out of each replication



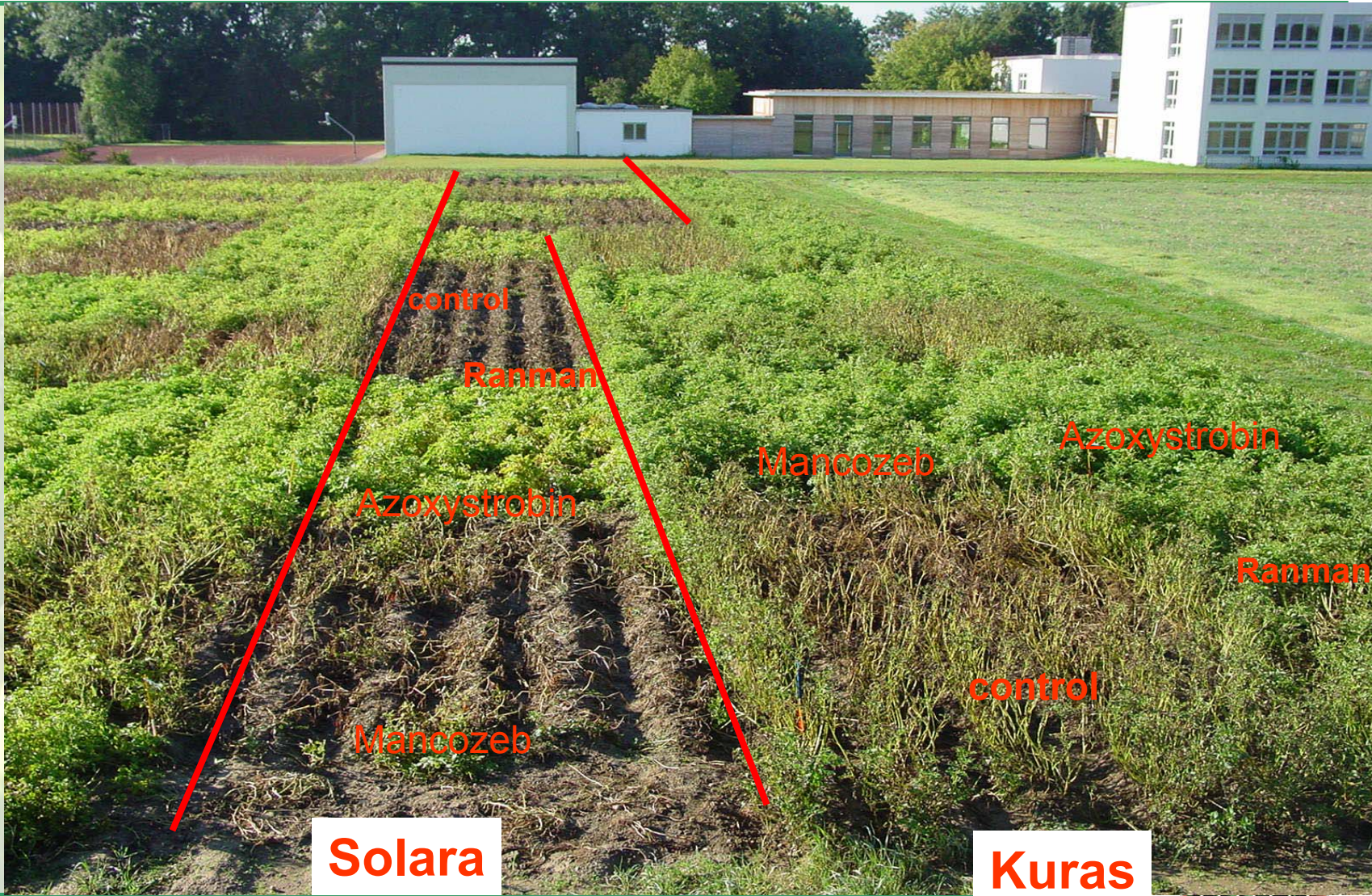
# AUDPC in different varieties - untreated



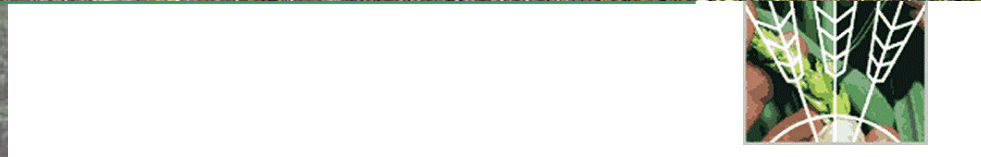
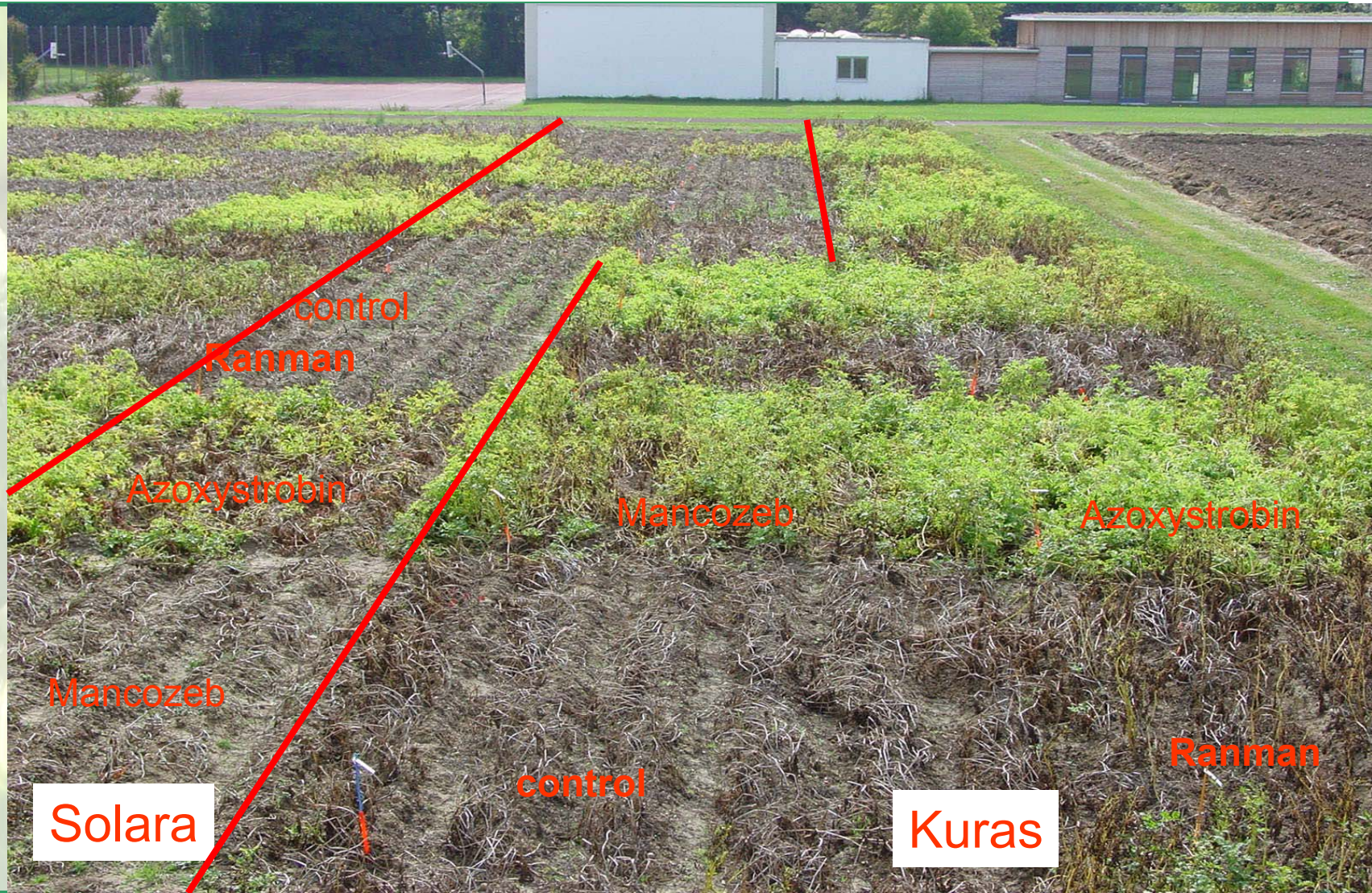
# comparison of varieties: AUDPC Kuras, Logo, Maxilla



# Field trial: Sept. 1st, 2006



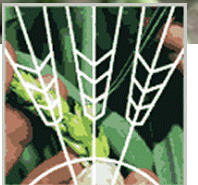
# Field trial: Sept 20th, 2006



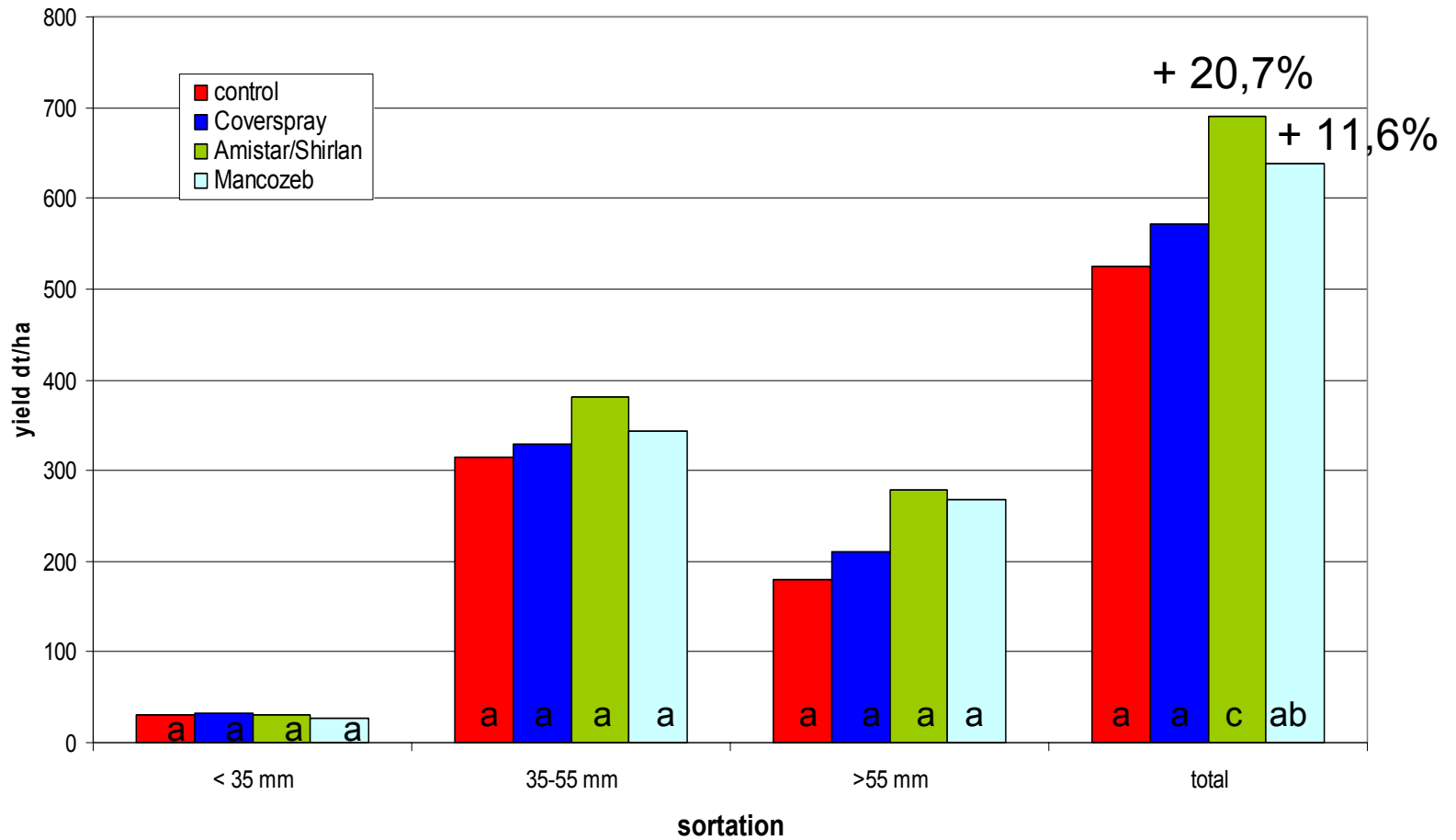


estimation of:

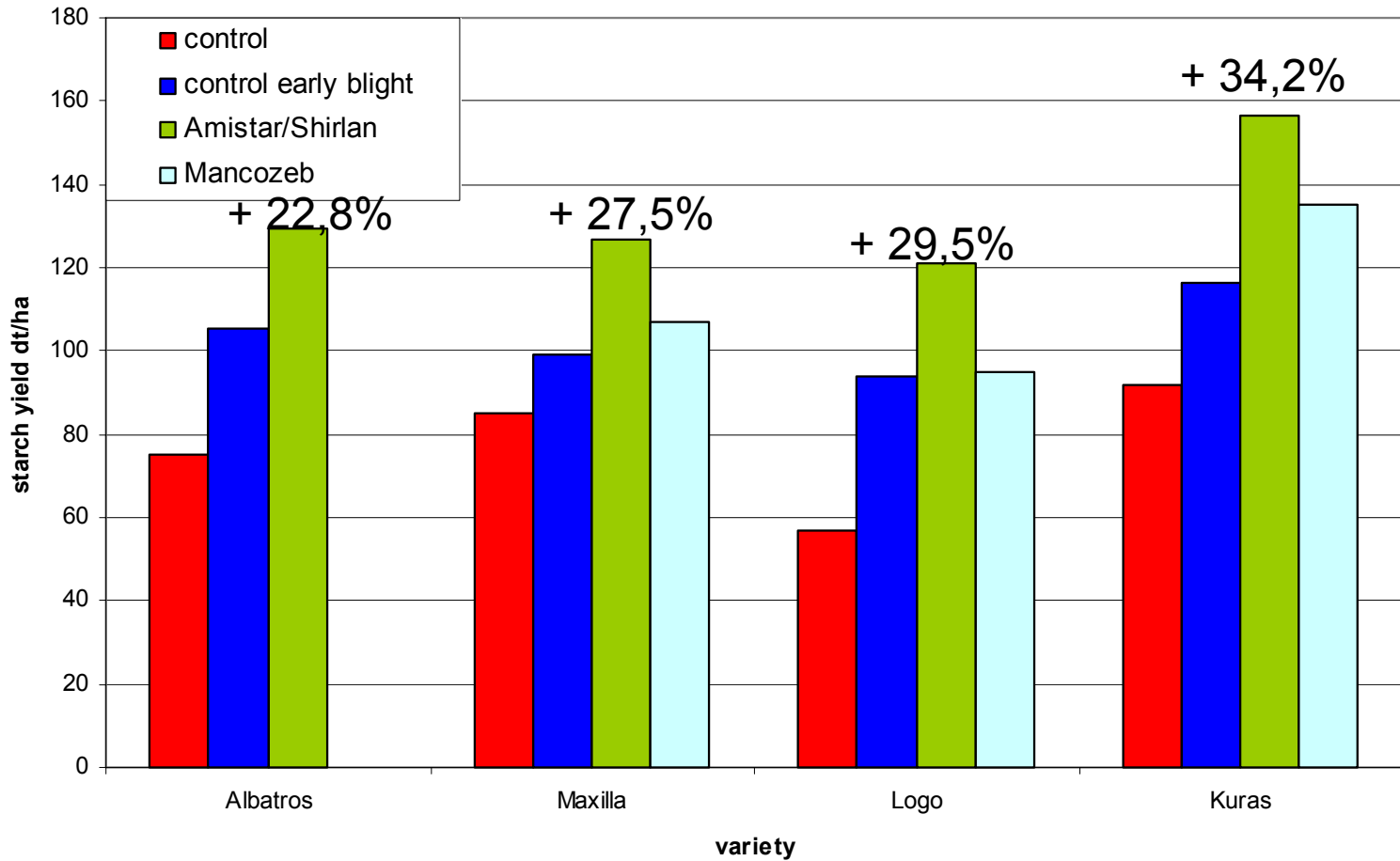
- tuber yield
- tuber size (<35, 35-55, >55)
- starch content



# sortation Kuras

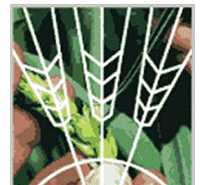


# Starch yield industrial varieties



## conclusion

- All tested varieties showed medium to high susceptibility against early blight
- Early maturing varieties showed higher incidence in disease severity of early blight as late maturing varieties
- Variety-dependent differences concerning early blight susceptibility were detected within the maturity group
- Early blight affects yield relevant factors: tuber yield, starch content, tuber size
- By the use of Azoxystrobin tuber yield and starch content was significantly increased in comparison to application of mancozeb



Thanks for your attention !

