



RIKILT

WAGENINGEN UR

## **Study on the effect of agronomic factors and weather variables on mycotoxin levels in wheat and maize.**

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**Cluster:** Novel Foods & Agroketens  
**Internship number:** NFA\_2011\_07

Mycotoxins are secondary metabolites produced by fungi. The predominant fungal species in the Netherlands is *Fusarium graminearum* producing deoxynivalenol and zearalenone. Both weather parameters (temperature, rainfall, RH) and agronomic factors (such as previous crop, tillage and cultivar used) influence the level of *Fusarium* spp present and the subsequent mycotoxin production. In order to determine which factors are most important, a field study will be organized among cereal growers. Questionnaires on farm conditions will be sent to participating farmers. Around harvest, maize and wheat samples will be collected and mycotoxins will be analysed at RIKILT using LC-MS/MS. The study will be organized in close collaboration with Plant Research International (PRI). Based on the results, relationships between agronomic factors and weather variables and mycotoxin levels found will be investigated.

### ***Main techniques***

Desk study, possibly combined with laboratory techniques for mycotoxin analysis (depending on background)

### ***What we are asking***

An enthusiastic student with relevant training and knowledge looking for an internship of three months minimal.

### ***What we offer***

Expert guidance during the internship. Next to that a monthly internship fee of € 295,--.