

Intermediate report ERA-168
AGROECOLOGIE- INRA Dijon - Partner 10 – WP2



Participants:

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Context :

In the new context of agriculture eco-aware with lower pesticide input, the objective of INRA proposal is to identify a genetic determinism for lower *Bruchus* susceptibility in *Vicia faba* collections.

Faba bean accessions from :

- (1) The collection of INRA Dijon (collection recognised by CGIAR- TRUST)
 - (2) accessions collected by SEELEGUME partners
- will be assessed for bruchus tolerance in field conditions.



Bruchus rufimanus Boh.



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Our proposal:

1) TO COLLECT SAMPLES OF SEEDS FROM YOUR GERMPLAM WICH PRESENTS LOW BRUCHUS DAMAGES WITHOUT INSECTICIDE or THAT YOU MAY CONSIDER TO BE OF INTEREST FOR THIS TRAIT (seed size, color size, geographical origine , ...)

2) TO ASSESS THIS COMMON GERMPLASM **FOR BRUCHUS TOLERANCE**
-IN OPEN FIELD CONDITIONS
-WITHOUT INSECTICIDE APPLICATION
-IN A SPECIFIC DEVICE IN DIJON AND IN ANOTHER PARTNER SITE

IN ORDER TO CROSS CULTIVARS ORIGIN x BRUCHUS ORIGIN

Field assessment in Dijon 2012:

28 cultivars

Plot size : 2 lines of 30 plants (2m x 0.50)

2 replications

1 common control (cv Melodie) near each experimental plot



Traits scored

Bflo, Stage FP2 (1st pod 2cm), Eflo

Pod size, Plant height, Flower color ,TSW, hilum color.

Mechanical harvesting and damage recording on 2 samples of 100 seeds/plot

Damages recording :

% seeds with hole with or without adults (a)

% seeds with superficial damages -bites (b)



Total damages (a+b)

&

% larvae mortality

$(b / a+b)*100$

Common germplasm : 28 genotypes

159B	France	290	VIC 201	Serbia	492
2378	France	540	VIC 202	Serbia	539
Espresso	France	436	VIC 203	Serbia	594
Tyrol	France	527	VIC 204	Serbia	467
Mélo die	France	500	VIC 206	Serbia	674
928 CRB	France	608	A 3 BM 0131	Bulgaria	759
340	France	334	A 3 BM 0133	Bulgaria	717
SRGB 1344	Slovénia	889	A 3 BM 0136	Bulgaria	697
SRGB 1348	Slovénia	700	A 3 BM 0148	Bulgaria	792
SRGB 1353	Slovénia	678	A 3 BM 0149	Bulgaria	727
SRGB 1357	Slovénia	857	A 8 E 0001	Bulgaria	1094
SRGB 1374	Slovénia	943	A 8 E 0050	Bulgaria	886
Greece 1 #	Greece	1455	B 0 E 0006	Bulgaria	354
Greece 2 #	Greece	466			
Greece 3 #	Greece	350			



Common germplasm was shared and assessed under restricted conditions of uses precised in Material Transfert Agreements.

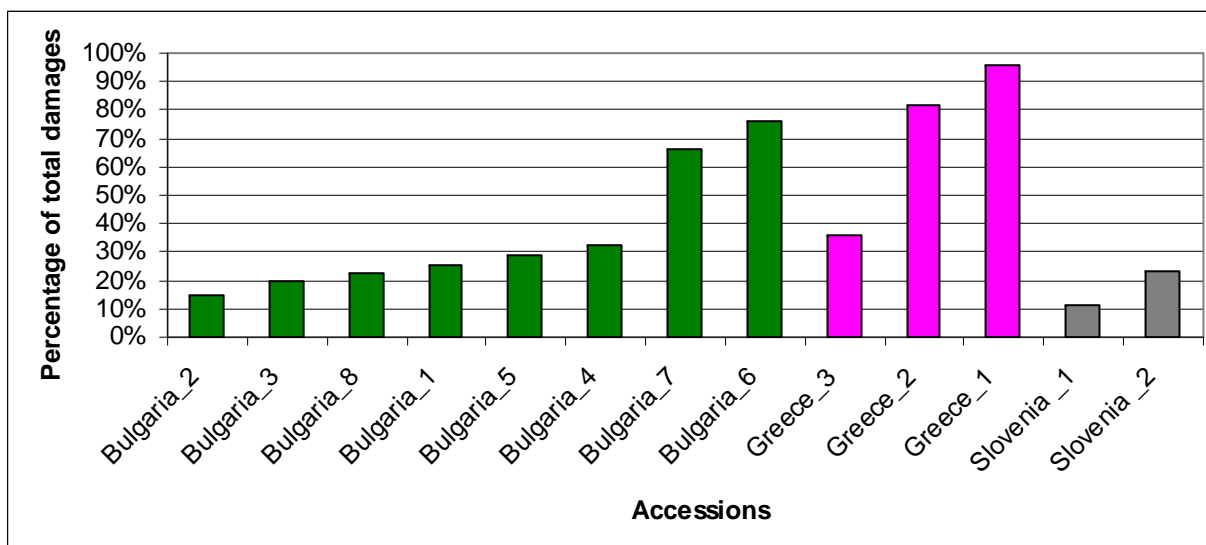
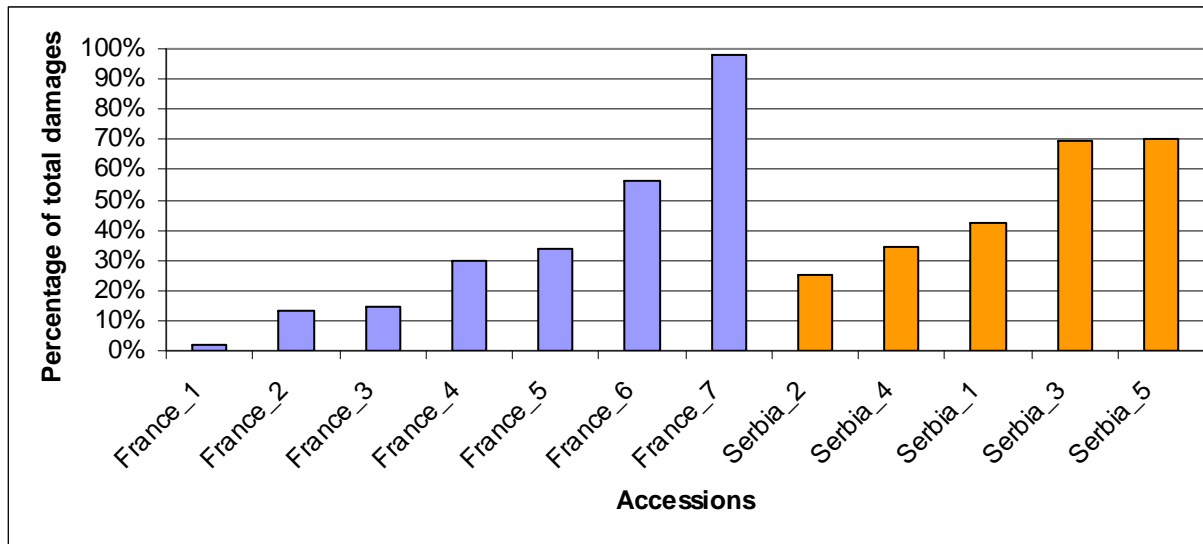
Field assessment in Dijon 2012:

First results : total damages

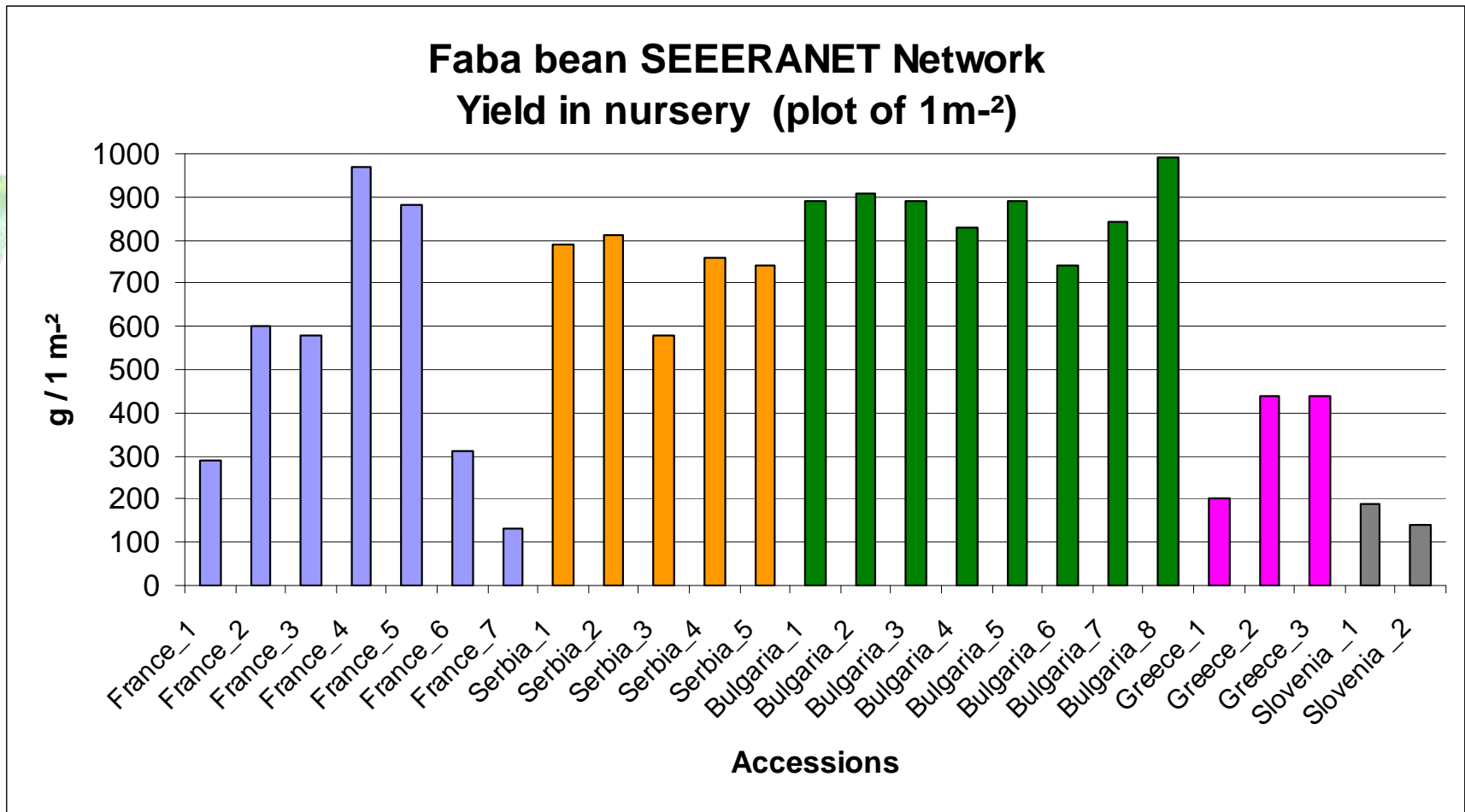


Using neighbour control allows to make a cartography of the intensity of the total damages in the field.

Field assessment in Dijon 2012: First preliminary results : total damages



Field assessment in Dijon 2012: First preliminary results : yield in nursery



Thanks for your attention

