A Study of the Genetic Reserves of Common Bean Landraces at CPD, Hungary.

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NÖDIK
NÖVÉNYI DIVERZITÁS KÖZPONT

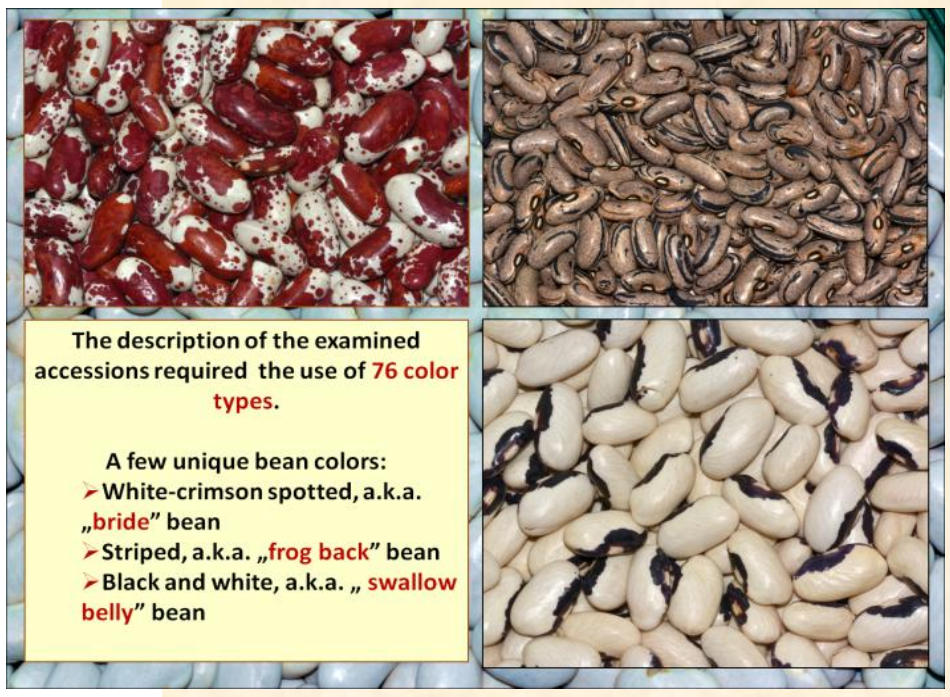
The gene bank collection of common bean at the Center for Plant Diversity:
4416 accessions.

Of these the number of landraces:
3096 accessions.

Of these the number of those that have Hungarian origin:
2500 accessions.

Landraces from the neighbouring countries:
596 accessions.

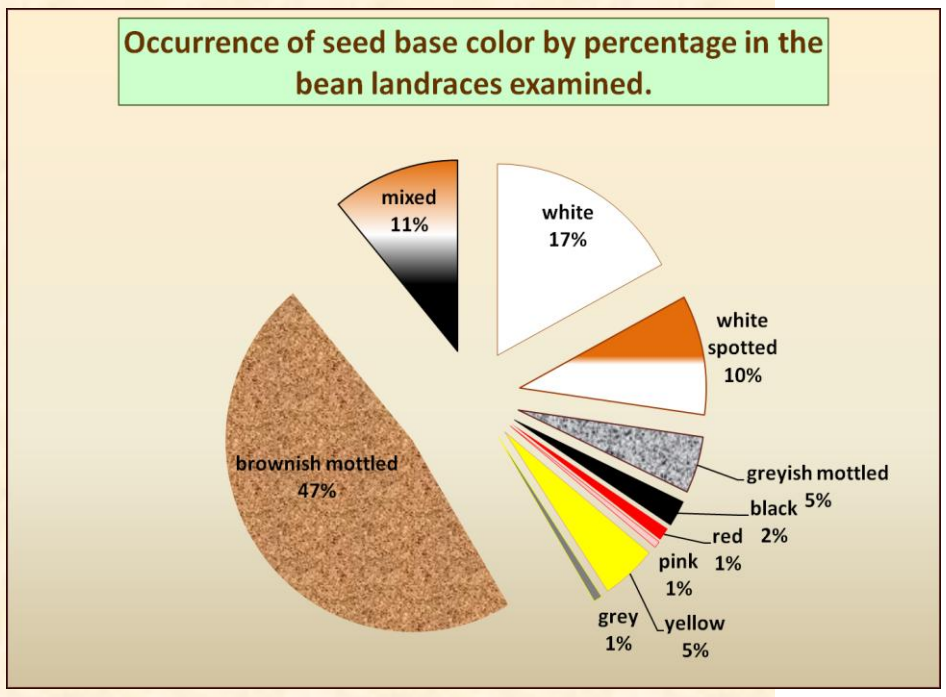
Examined in the present study:
669 accessions.



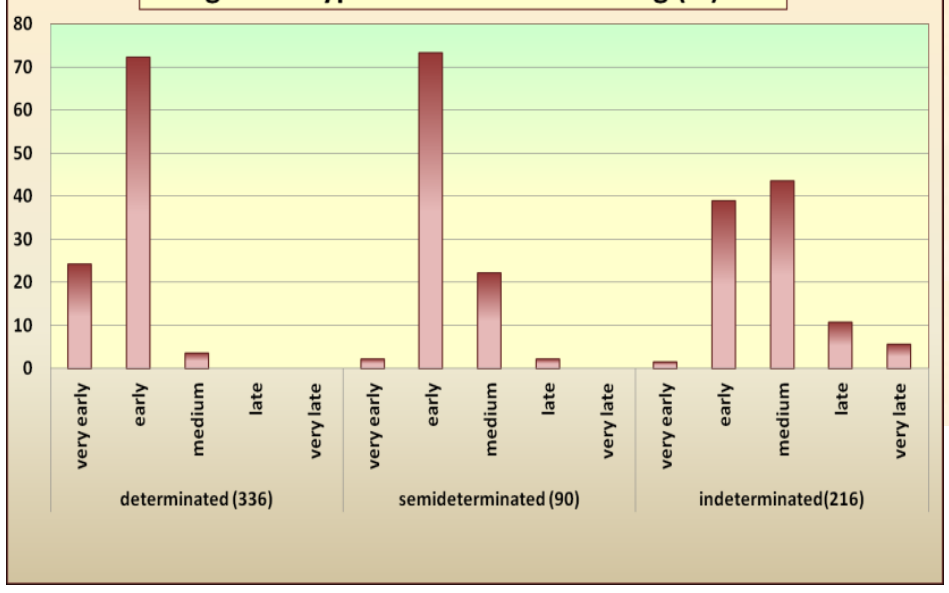
The description of the examined accessions required the use of 76 color types.

A few unique bean colors:
- White-crimson spotted, a.k.a. „bride" bean
- Striped, a.k.a. „frog back" bean
- Black and white, a.k.a. „ swallow belly" bean

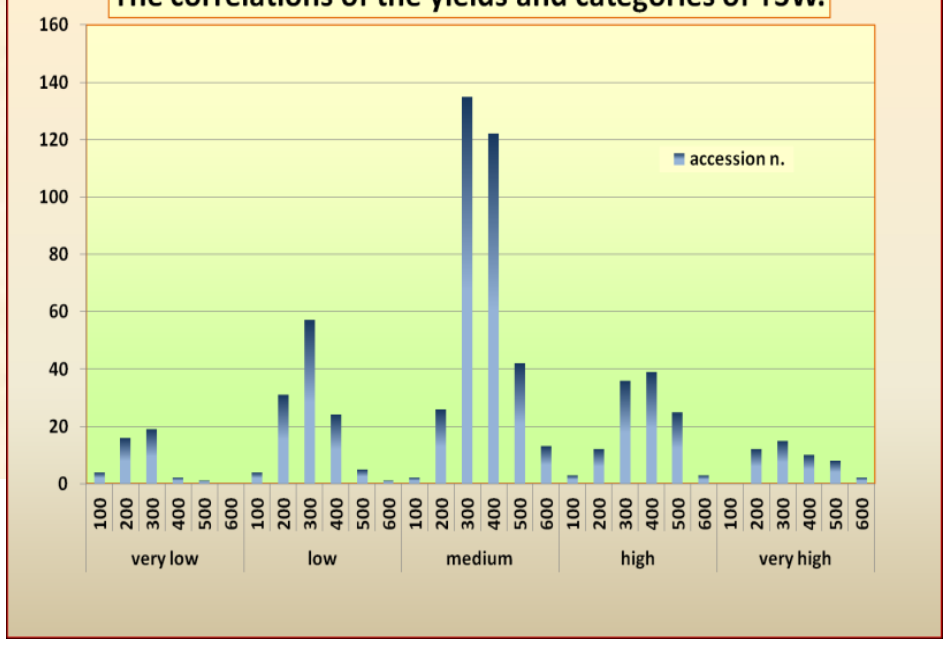
Occurrence of seed base color by percentage in the bean landraces examined.



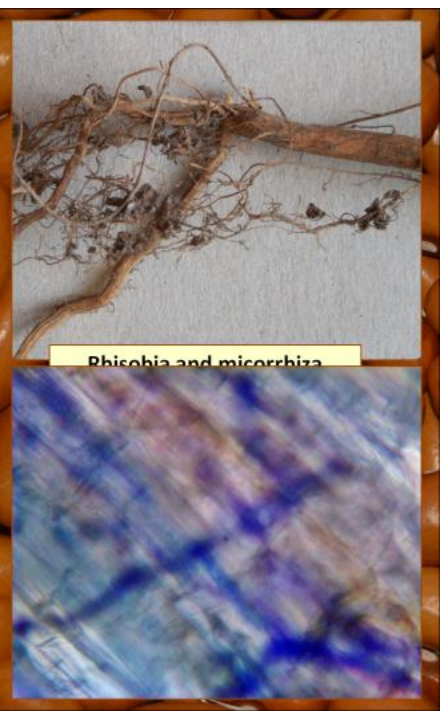
Distibrution of the examined bean landraces by growth type and time of flowering (%)



The correlations of the yields and categories of TSW.

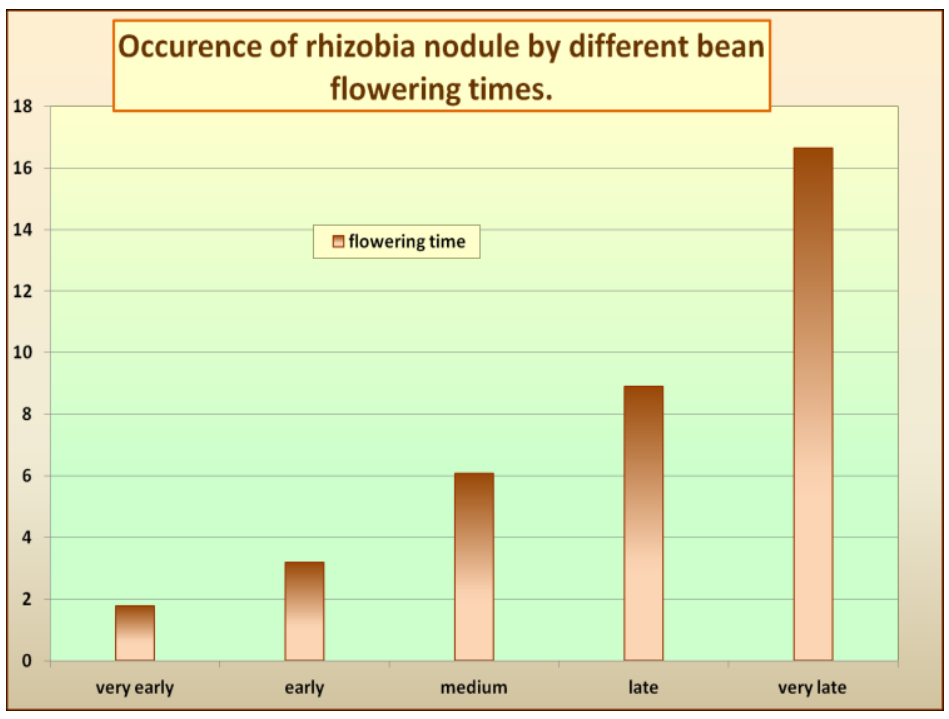


It's obvious that a guidebook about the bacterial (Rhisobium nodule) and fungi (micorrhiza) contamination of landraces might prove useful for breeders.
Our data shows that root nodule occurrence does not correlate with yields, however, it underscores the evident assumption that longer life of plants increases the chances of bacterial colonization. This highlights the role of the once used intercropping of bean and maize in nitrogen reinforcement.

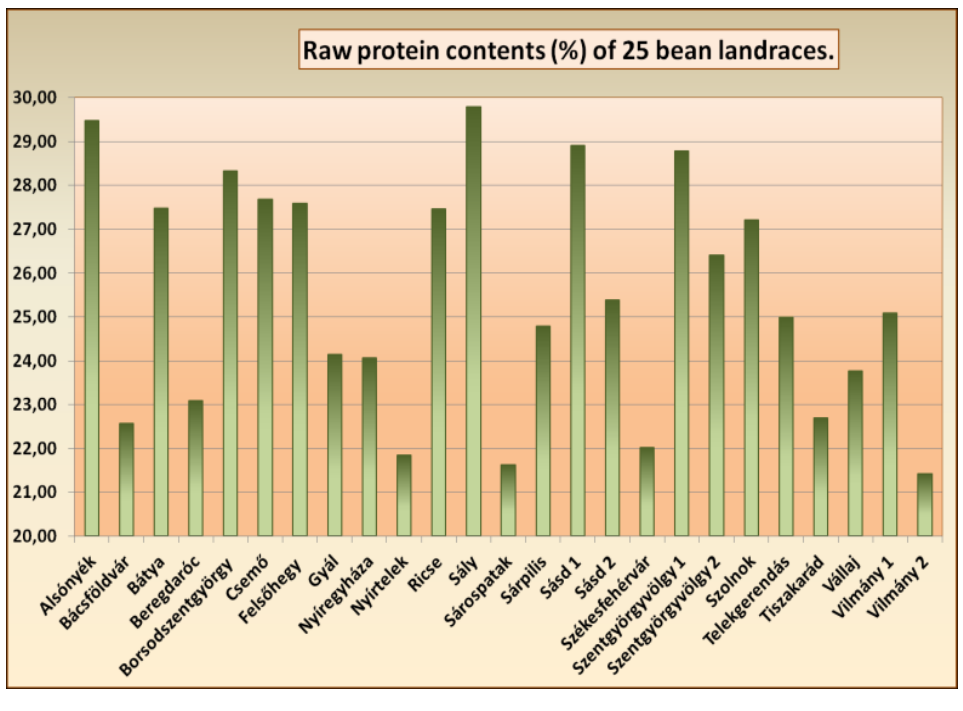
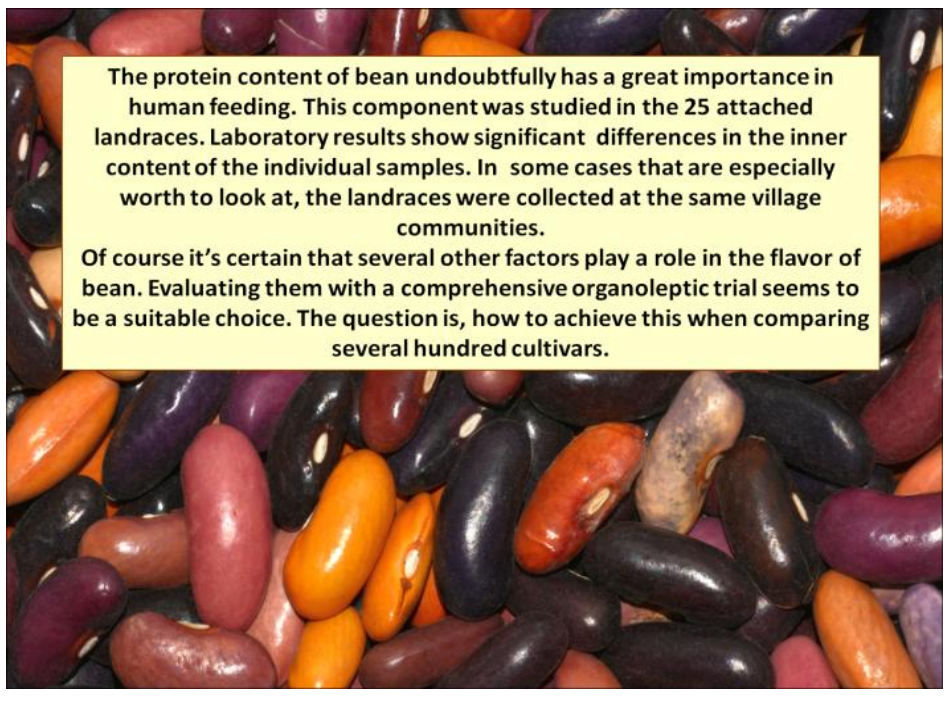


Rhisobia and micorrhiza

Occurence of rhizobia nodule by different bean flowering times.



Raw protein contents (%) of 25 bean landraces.



The protein content of bean undoubtfully has a great importance in human feeding. This component was studied in the 25 attached landraces. Laboratory results show significant differences in the inner content of the individual samples. In some cases that are especially worth to look at, the landraces were collected at the same village communities.
Of course it's certain that several other factors play a role in the flavor of bean. Evaluating them with a comprehensive organoleptic trial seems to be a suitable choice. The question is, how to achieve this when comparing several hundred cultivars.