The accurate characterization of germplasm accessions of a crop species under consideration of all available morphological, phenological, and molecular information is the basis of every sensible breeding program. We have started the collection and evaluation of *Phaseolus vulgaris* and *coccineus* samples in 1996. Germplasm collection of the common bean consist of 1183 accessions now and more than half of them are originated from the collection of Cambridge University and transferred to Belarus by Adrian J. Shirlin in 1996. Most part (~ 80 %) of *Phaseolus coccineus* collection (total 92 accessions) are the local samples, other accessions were selected as matured in Belarusian conditions from received from different European genebanks. Including of new samples into collections is carried out after 1-year field tests. We test and add the new samples of the common and runner beans into our germplasm annually.

The botanical and agronomical evaluation of the collection samples is carried out under “Handbook on evaluation of Phaseolus germplasm” by C. De La Cuadra, A M. De Ron and R. Schachl with some modification for seed colour. We have not a possibility for the long term saving of the seeds, therefore we re-sowing the collection samples annually with full estimation of the traits. Thus, these our activities during 12 years have permitted us to collect the present germplasms with high variability of the investigated traits.

Common bean cropping in Belarus, especially in the south regions, have shown socially and economically importance both in small farmers (mainly, dry bean) and farm industry (both dry and French bean). Small farmers usually use the wide range of the landraces. There is only 1 cultivar of the dry bean registered in Belarus in 1972. There are few varieties of the French bean registered in Belarus and all of them are originated from Europe (mainly, from Poland and Russia). Thus, genetic breeding research is largely responsible for the development of this crop in Belarus, because there is no really good adopted to Belarusian condition varieties with stable productivity now. Thus, we have started the selection of the parental pairs and hybridization in 1997 and in 1999 we have carried out the hybridization of 8 varieties of Navy and Small white types (Snowbounting, Fleetwood, Upland, Edmund, Harofleet, Mela, Adrian, Albion - most perspective commercial types of common bean in Belarus) by diallel scheme to estimate the combine abilities of the parental samples and adaptive abilities of the hybrid population to determine the best parent components for the future breeding programs. As a result we have now some perspective high productive lines of Navy type very adaptive to Belarusian conditions.

We have received a number of hybrid populations of common bean and some new lines from Cambridge (UK) together with germplasm samples. As a result of the next breeding work we have selected some very productive and adaptive lines and one from them (named Riche, Navy type) now is tested in State Commission for varieties testing. Thus, such international cooperation permitted us...
to produce new varieties with high seeds productivity (up to 3.4 t/ha in Riche (+20 % to standard variety after 2-years state trials).

There is not any variety of *P. coccineus* registered in Belarus, but interest for this crop is very high because the seeds are very large. The most part of the samples from European genebanks is too late matured and has very long pods. Some from the collected white-seeds climbing local samples have short pods and seeds are located very close. Also the most part of the local samples are fully matured before end of September (the closing date to harvest bean seeds in Belarus). Another challenge problem for the breeding of new varieties of *P. coccineus* for Belarus is the absence of samples with bush determinant type of the plants which combine with short vegetation period in the collected germplasm. Using of some varieties with determinant bush type (but with long period of vegetation) by way of the source of such habitat and some white-seeds early matured local samples we have created a hybrid populations with wide range of the traits. Some lines from these populations can be perspective to be registered as new varieties.

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