Collection of vegetable crops, medicinal plants and their wild relatives in Ukraine

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Vegetable landraces, farm in Bila Cerkva, Zakarpat'ska oblast'. Photo: M. Kotliński



The collecting mission was organized by Plant Genetic Resources Lab. of Research Institute of Vegetable Crops, Skierniewice, Poland in collaboration with the National Centre for PGR of Ukraine (NCPGRU), Kharkiv. The mission was supported by International Plant Genetic Resources Institute, Rome, Italy and additionally by Polish Ministry of Agriculture and Rural Development.

The expedition was realized in two parts. The first part was conducted in Western Ukraine from 24th September to 5th October 2006 (4 participants from Poland and 3 from Ukraine). Exploration started in L'viv and covered provinces: Lvivska, Rivnienska, Ternopil's'ka, Chmelnycka, Cherniwec'ka, Iwano-Frankivs'ka and Zakarpat'ska - totally 3600 km.

The second part was conducted in Southern Ukraine from 24th November to 7th December 2006 (3 participants from Poland and 2 from Ukraine). Collecting mission started in Vinnytsa and covered provinces: Vinnyts'ka, Cherkas'ka, Mykolayivs'ka, Odes'ka and Kirovograds'ka - totally 4000km.

The route of both missions led trough regions located in forest-steppe, steppe and mountains geographic zones where the great diversity of cultivated crops and wild relatives of crop plants and wild medicinal plants has been observed.

The objectives of the mission was to collect and preserve the diversity of vegetable crops, medicinal plants and related wild species endangered by extinction.

> Achievement of independence in 1991 caused changes in structure of Ukrainian agriculture. State and collective farms were divided among the farm workers. Most of privatised land was leased to newly created private agricultural

associations. So, it is necessary to preserve the diversity where traditional varieties are being replaced by modern cultivars.

Germplasm were collected in home gardens, farms, local markets, scientific institutions, botanical gardens, natural and ruderal habitats, field margins, etc. Seeds, bulbs or other propagules were gathered. During seed sampling attention was paid to receive a good representation of population diversity. Geographical coordinates, elevation of each collection site and route of mission were recorded by GPS unit. Data from GPS were downloaded to MySQL database during exploration. Other relevant information about collection sites and passport data of accessions in EURISCO format were entered to this database. Farmers were Interviewed to obtain information about collected accessions (local names, origin, usage of the material, etc.).

During exploration 1309 accessions have been collected (583 in first mission and 561 in second) and included 160 species. Germplasm were collected in 190 sites (92 in first mission and 98 in the second). Most of accessions (78,6%) were obtained from people living in villages, 9,6% were bought on markets, 5,6% were collected in wild habitat, 3,6% from experimental stations and 2.7% were found in ruderal habitat. Collected materials were shared between Ukrainian and Polish partners. Collected germplasm did not exist in other collections. Both collections are enriched with valuable landraces, old cultivars and medicinal plants traditionally cultivated for a very long time. All materials are protected in both gene banks and are available to ECPGR Vegetable Network, all qualified scientists/organizations and domestic and foreign users.

Strong expansion of western seed companies and moving from traditional, small-scale production to large-scale production will cause extinction of valuable landraces. Great diver-



Stepp near Yarovoye, Odes'ka oblast'. Photo: M. Kotliński, Warsaw University, Poland

sity of crop plants observed in Ukraine should be protected as fast as possible by organizing next collecting missions.



Vegetable landraces on local market in Kamieniec Podil's'kij, Chmelnycka oblast'. Photo: M. Kotliński

Number of collected accessions

Crop name	Acc. no.
Common bean	202
Onion	74
Tomato	70
Common garlic	63
Runner bean	51
Dill	47
Pumpkin	45
Pepper	45
Parsley	44
Corn	41
Red beet	36
Cucumber	33
Watermelon	32
Musk melon	29
Carrot	27
Shallot	23
Winter squash	17
Peas	16
Lettuce	16
Caraway	14
Broad bean	13
Lettuce	12
Radish	11
Soyabean	10
Fodder beet	10
White cabbage	9
Coriander	8
Parsnip	7
Other 134 species	304