THE AGRO-ECOTYPES OF COMMON BEAN (PHASEOLUS VULGARIS L.) FROM VAL BELLUNA (VENETO REGION)

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In the last decades, common bean agro-ecotypes have been gradually replaced by modern cultivars. However, recent studies show that several local populations still survive on-farm in marginal areas of several European countries. In Italy, the common bean cultivation is begun around 1550 in the Belluno province. Nowadays, this area represents a very interesting case study. In fact, in contrast to the national trend, the abandonment of local ecotypes of Belluno province is not attributable to the modern cultivars but to the competition of common beans from Lamon. These are four very appreciated agro-ecotypes that recently obtained the PGI mark (protected geographical indication) by the European Union.

The present study was undertaken, in collaboration with IPSAA 'Della Lucia' (Feltre, Belluno), to compare the common bean from Lamon with the ecotypes 'Gialet', 'De la Nela', 'Bala rossa' and 'Bonei' gathered from various places in Val Belluna. Morphological characters of both plant and seed, the phaseolin pattern and some nutritional seed traits were investigated.

All the studied ecotypes are of climbing habit and had large seeds (100 seed weight from 39 to 92g). An appreciable phenotypic variation of seed (shape, size, colour, type and colour of coat pattern) was observed among the ecotypes while no variation was detected within them. The study of phaseolin pattern evidenced that both Mesoamerican and Andean gene pools were represented being detected S, T and H phaseolin patterns. T and H types were the predominant ones. A very low intra-population variation of phaseolin pattern was detected only for the Lamon ecotype 'Calonega'.

As a general rule, only few of the still cultivated indigenous agro-ecotypes have a commercial value, thanks to their good pod and/or seed quality. This study evidenced that 'Gialet' ecotype deserves particular attention being its seed quality comparable to the most appreciated common bean from Lamon. Traits that allow the distinction between 'Gialet' common bean and 'fagiolo zolfino' (from Tuscany) were identified. Unfortunately the 'Gialet' ecotype is threatened of disappearing in the next decades. In fact, local farmers are attracted by common beans from Lamon that assure higher productions (4 vs 2.2 t/ha) and higher incomes. Consequently, the survival of 'Gialet' common bean is strictly dependent on suitable and urgent initiatives of safeguard and promotion as niche product.