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O7- Agro-morphological diversity of local and international accessions of the Spanish Pear Germplasm Bank in Zaragoza

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A set of 34 landraces and local accessions and 39 international reference varieties from the Spanish Pear Germplasm Bank in Zaragoza (Spain) was agro-morphologically characterized based on 50 Bioversity International and UPOV descriptors (24 quantitative and 26 qualitative) in order to evaluate the agro-morphological variability of the Spanish germplasm, identify the most relevant differences with the reference cultivars and group the varieties according to their agro-morphological distances. The correlation analysis between the 24 quantitative descriptors revealed few significant correlations, four positive ('leaf blade length'-'leaf blade width', 'season of ripening'-'fruit size', 'russet around eye basin'-'russet on cheeks' and 'russet on cheeks'-'russet around stalk') and one negative ('leaf blade width'-'ratio length/width'). The traits showing the highest phenotypic variability were 'fruit size', 'fruit firmness', 'fruit acidity', 'leaf distance from the stipules to the petiole base', and 'length of leaf pointed tip'. As a whole, the Spanish accessions were more precocious in flowering and ripening time than the international reference group, showed a bigger flower petal size, a smaller fruit size, a more rounded fruit shape, less incidence of skin russet amount and more 'spreading' fruit attitude of sepals. The dendrogram obtained from the agro-morphological distances does not group the accessions according to their geographical origin; nevertheless a small group of Spanish cultivars ('Don Guindo', 'L-3.2.10' 'Duquesa Barreda', 'Limón de Verano', 'Malacara', 'Tocinera' y 'Magallón') showed a higher distance to the rest of accessions included in the study.

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