Poster Abstract - C.40

## CHARACTERIZATION OF A RED CHICORY INTERCROSSING POPULATION FOR MORPHOLOGICAL AND MOLECULAR TRAITS

M. NUNZIATA-REGA, R. GARRAMONE, D. CARPUTO, L. FRUSCIANTE, M.R. ERCOLANO

Department of Soil, Plant and Environmental Sciences – University of Naples "Federico II", Via Università 100, 80055 Portici, Italy

red chicory, descriptors, phenotipic traits, AFLP

Red or variegated chicory represent valuable high-quality Italian crop that is acquiring more and more commercial interest. This vegetable, locally called "radicchio", includes different types, which differ both for head shape and leaf colour. In this species is difficult carry out genetic studies for the allogamous mating system and the presence of sporophytic incompatibility. Selfing is also limited by unfavourable flower morphology and a strong gametophytic competition between self and crosspollination. At present commercial varieties are obtained from synthetic populations. Breeding programmes are developed to select the best local lines to combine in new varieties. The aim of this work was to analize an intercrossing population for traits related to morphological uniformity and to perform an AFLP molecular analysis to characterize these lines. Specific descriptors were generated to define characters difficult to measure precisely. In fact, most of traits of interest, including leaf shape, leaf colour, head shape, heading capacity and rib thickness, showed a continuous variation, strongly influenced by environmental conditions. A subset of individuals that represent the most extreme phenotypes in the population were identified and molecular analysis to find association between phenotypic traits and molecular markers has began.