

## ABSTRACT

### EFFECT OF DIFFERENT CULTURAL PRACTICES ON YIELD AND SOME QUALITY OF YARROW (*Achillea asplenifolia* and *Achillea collina*) SOME FEATURES OF POPULATIONS

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This study was conducted in 2013-2014 in order to determine the effect of different cultural practices on the yield and some quality features on the field of Research and Field Application of Faculty of Agriculture, Adnan Menderes University. Experiment materials which originate from Bulgaria were *A. millefolium* var. *asplenifolia* and *A. millefolium* var. *collina* sub-species that belongs to *Achillea* species. A-three-factorial random block design was used in this study. The main parcel consisted of nitrogen doses (0, 5, 10, 15 kg/da), sub-parcels were plant species and sub-sub parcels were harvest times (onset of flowering, full bloom and end of flowering). Study was gathered under three main headings, morphological features (number of days to flowering (days), plant height (cm), flower diameter (mm), stem diameter (mm) and the number of flowering branches (quantity)), agronomic features (fresh herb yield (kg/da), drug herb yield (kg/da) and drug flowers yield (kg/da)), technological features (essential oil content (%) and essential oil yield (L/da)) to determine the appropriate doses of nitrogen and harvest times. Also species differences were characterized in order to determine intraspecific differences. They were determined in this study that drug herb yield of first year was 84.60-309.71 kg/da, the second year 179.10-1163.05 kg/da, drug flowers yield of the first year was 36.94-472.80 kg/da, the second year was 16.41-568.81 kg/da and essential oil content of the first year was 0.07-0.40%, the second year was 0.13-0.51%. It was determined that plant height and yield values of single plants which were belonged characterized populations were increased in the second year compared to that of the first year. In this study all features those indicated were determined that there was wide variation in both within the population and between populations.

**Keywords:** *Achillea* spp., Ontogenetic variability, yield, essential oil content, chamazulene