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WINTER CHICKPEA (*Cicer arietinum* L.) BREEDING: YIELD, MORPHOLOGICAL TRAITS, AND ASCOCHYTA BLIGHT UNDER EASTERN MEDITERRANEAN CONDITIONS

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Objective: This study aimed to determine the agronomic and morphological characteristics, grain yield and yield components of chickpea (*Cicer arietinum* L.) genotypes grown as a winter crop under Eastern Mediterranean conditions and to evaluate their tolerance to Ascochyta blight. It also aimed to support the selection of genotypes suitable for developing cultivars well adapted to regional conditions, high yielding, resistant or tolerant to diseases and pests, compliant with quality and market standards, and suitable for mechanized production.

Materials and Methods: The study was conducted in 2024 at the Doğankent location in Adana Province as part of a national breeding project aimed at developing chickpea cultivars resistant or tolerant to Ascochyta blight. The experimental site was located at 23 m above sea level, at 36°51′17.21″ N and 35°20′41.61″ E. Twenty chickpea lines and cultivars were evaluated. The experiment was conducted as a winter crop under Eastern Mediterranean conditions using a randomized complete block design with three replications. Each plot consisted of four 5-m rows, with 45 cm between rows and 6 cm between plants, giving a plot area of 9 m². Before sowing, 2–3 kg N da^{-1} and 5–6 kg P_2O_5 da^{-1} were applied. Grain yield (kg da^{-1}), 100-seed weight (g), days to flowering, days to pod setting, plant height (cm), and first pod height (cm) were determined for each genotype, and reactions to Ascochyta blight were evaluated.

Results and Conclusion: Grain yield ranged from 74.94 to 242.00 kg da^{-1}. The highest yield was obtained from Caner × Osmaniye 1 (242.00 kg da^{-1}), whereas the lowest was recorded for Sezenbey × Tatlar-2 (74.94 kg da^{-1}). The 100-seed weight ranged from 37.50 to 56.05 g, with the highest value in Sezenbey × Tatlar-2 and the lowest in İnci. Days to flowering ranged from 78.00 to 86.66 days, days to pod set-

ting from 88.33 to 97.33 days, plant height from 59.45 to 81.66 cm, and first pod height from 26.11 to 39.44 cm. Based on grain yield performance, Caner × Osmaniye 1, Tüb × 2016 F5 Pop4-2, İnci, and Seçkin were identified as promising breeding materials for cultivar development under Eastern Mediterranean conditions. Disease evaluations indicated that earliness, precipitation, and 100-seed weight were associated with Ascochyta blight development. In particular, earliness and environmental conditions may affect disease onset and severity. However, multi-location and multi-year studies are required to reliably characterize genotype tolerance and genotype × environment interactions. These findings may contribute to breeding efforts aimed at developing high-yielding chickpea cultivars adapted to Eastern Mediterranean conditions and tolerant to Ascochyta blight.

Keywords: Chickpea (*Cicer arietinum* L.), Ascochyta blight, Agro-morphological traits, yield.