

ABSTRACT**GRAIN CHARACTERISTICS AND RELATIONSHIPS BETWEEN CHARACTERS IN CONFECTIONARY SUNFLOWER (*Helianthus annuus* L.) POPULATIONS****Orçun POLATLI**

M.Sc. Thesis, Department of Field Crops

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This study has been carried out in the experimental field of Aegean Agricultural Research Institute (AARI) in 2011 production year for the purpose of determining the yield and agronomic characters of some confectionary populations (*Helianthus annuus* L.) and relationships between the characteristics. Twenty plants from each population, selected at random from 4 F₃₋₄ confectionary sunflower populations which have been developed by recurrent selections were made as research material. The characteristics examined in the research included head diameter, plant height, grain size, grain width, single plant yield, thousand kernel weight, oil rate and shell rate. The population-4 with tall plant height, large head diameter, high grain size, grain width, single plant yield, oil rate and low shell rate was considered. The significant and positive correlation coefficients were found between single plant yield, head diameter, plant height, grain width, thousand kernel weight and oil rate. As a result of path analysis it has been observed that the plant height, head diameter and grain width is decisive as the selection criterion as far as the improvement studies on the population is concerned.

Key words: Confectionary sunflower, plant yield, kernel characteristics, relationships between characters.