AGRONOMICAL AND CHEMICAL CHARACTERIZATION OF SPEARMINT (MENTHA SPICATA L.) ORIGINATING IN TURKEY. Economic Botany 58(4):721-728, 2004. The essential oil properties of spearmint (Mentha spicata L), one of the most important spice plants, were studied and the essential oil components determined using gas chromatography. The essential oil content of wild-grown spearmint in the region was found to range from 1.00% to 2.00%, and two chemotypes were identified, one high in carvone (49.53-80.65%) and the other in pulegone (44.9-49.23%). Agronomic and essential oil properties of cultivated landraces of M. spicata were also investigated under field conditions during the 1999 vegetation period. The examined spearmint landraces showed a great variability for each character studied, including yield and essential oil components. The crop was harvested twice during the vegetation period, and the essential oil content of the landraces varied from 0.90 to 2.70% in the first harvest and from 1.00 to 3.00% in the second one. Carvone was constantly present as the predominant essential oil in landraces, except for one sample, which was high in linalool (82.80%). Superior landraces with carvone contents were discovered; their maximum content reached 79.70% in the first cutting and 82.97% at the second cutting. The superior landraces were assayed for future improvement studies.