Abstract: In this study, the fatty acid, tocopherol, tocotrienol and plastochromanol-8 contents of some selected Fabaceae (Leguminosae) species belonging to different genera (Colutea, Vicia, Lathyrus, Gonocytisus, Lupinus, Hedysarum, Onobrychis, Trigonella) from Turkey were determined by using GLC and HPLC techniques. Some of the studied species are endemic to Turkey. The seed oils of different Leguminous taxa contained linoleic, oleic and linolenic acids as their major components. The ratios of these fatty acids in the Leguminous genera were found to be highly variable. Palmitic and stearic acids are the major saturated fatty acids in the seed oils. Vicia and Onobrychis patterns showed high similarity in means of qualitative fatty acid concentration. The tocopherol and tocochromanol patterns of the seed oils were also found to be highly variable among the genera investigated here. The total tocopherols was higher than the total tocotrienols. Alpha and gamma tocopherols were also the highest tocopherols present in the whole species. Beta, gamma and delta-tocotrienols were not found in most of the studied leguminous patterns. The results are discussed in view of renewable sources and chemotaxonomy.

Key Words: Fatty Acid, Tocochromanol, Fabaceae, Türkiye.