

Protein Mobilization and Proteolytic Enzyme Activities during Seed Germination of Broad Bean (*Vicia faba* L.)

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The protein mobilization from attached and detached seeds of *Vicia faba* L. cv. Eresen 87 (Fabaceae) was investigated. While the total soluble protein content decreased, the free amino acid content increased during the 7 days germination period. Among the three proteolytic enzymes, only endopeptidase activity was found to be affected by the removal of the embryonic axis. Leucine aminopeptidase activity was high at the beginning, then it decreased; carboxypeptidase activity reached the highest value at day 5. In order to examine the effects of plant growth regulators on detached cotyledons incubated with plant growth regulators [10^{-4} M benzyladenine (BA), gibberellic acid (GA_3), indole acetic acid (IAA) and 10^{-5} M abscisic acid (ABA)], only benzyladenine was found promotive on protein mobilization. Our results suggest that the removal of the embryonic axis in seeds of *Vicia faba* L. cv. Eresen 87 decreases protein mobilization and endopeptidase activity.

Key words: *Vicia faba* L., Protein Mobilization, Proteolytic Activity