Nitrogen is an important element for plant growth and development; therefore, it largely determines agricultural productivity [1].Due to their ability to fix nitrogen cyanobacteria provide an eco–friendly method for reducing dependency on external sources such as eutrophi– cation, soil degradation and greenhouse gas emissions.Cyanobacteria (including genetically engineered strains) that can transfer fixed nitro– gen to host plants, and thereby reduce the need for nitrogen fertilizers, increase plant stress tolerance and productivity [7], Fedeson and [8].The environ– mental problems, including eutrophication, soil quality destruction, and greenhouse gas emissions are associated with the depletion of nitrogen resources caused by the excessive use of synthetic fertilizers [6].Sustainable agriculture requires transformative changes, and integrating of cyanobacteria–based plant biotechnology appears to be a promising solution [2,3].