Soybean: Environmentally Friendly

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Abstract

Soybean is a high protein crop containing about 40% of protein. Thus N requirement in soybean is relatively high. Soybean obtains its N requirement from soil, fertilizers and atmosphere through N_2 fixation. The proportion of N derived from which part depends largely on soil fertility and management. Since soybean is considered as N_2 fixing crop, it is possible to manage soybean to obtain its N requirement mainly from N_2 fixation. In order for soybean to fix high N a specific strain of *Bradyrhizobium japonicum* has to be selected for high fixation with a soybean cultivar. It is also possible to select or breed soybean to have high nodulation and high N_2 fixation. To maximize factors, namely, climate, soil, and plant nutrients, cropping systems are considered as important. Quantitative data from Chiang Mai illustrate the role of soybean N_2 fixation in the N economy of cropping systems.