BIOLOGICAL NITROGEN FIXATION BY SESBANIA SPP

BY

Aliaa Mohamed Abd-El-Kader Ibrahim

A thesis submitted in partial Fulfillment

of

the requirements for the degree of

Master of science

In

Agriculture Science

Agricultural

(Microbiology)

Department of Agric. Microbiology

Faculty of Agriculture

Ain Shams University

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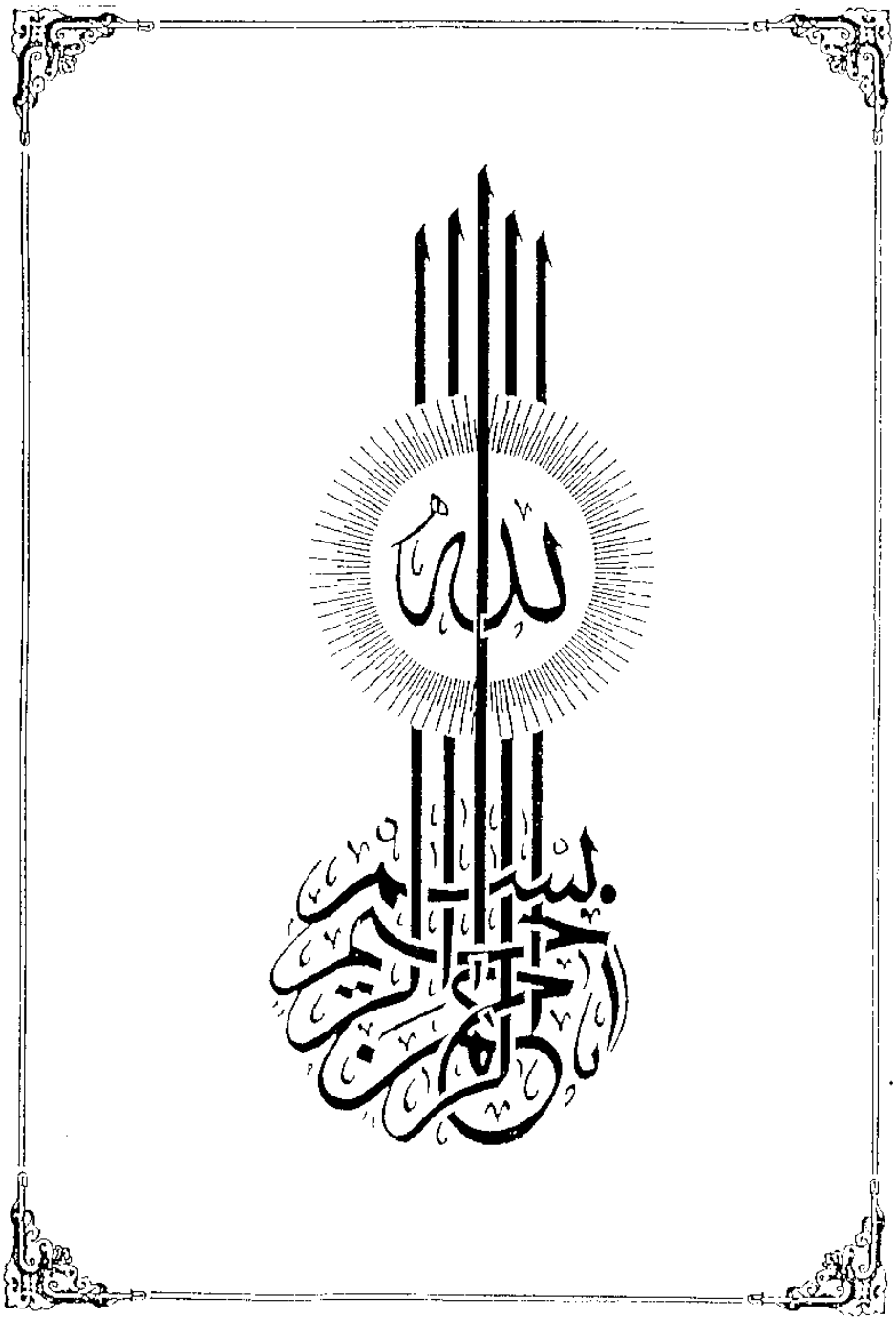

APPROVAL SHEET

BIOLOGICAL NITROGEN FIXATION BY SESBANIA SPP.

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Date of Examination / /1994

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ABSTRACT

Sesbania sesban and S. rostrata were compared with respect to their interactions with the two microsymbionts Rhizobium sesbani and Azorhizobium caulinodans ORS 571, their responses to soil fertilization with N and P and also their potentiality as green manure for maize. Azo.

caulinodans ORS 571, appeared to stimulate growth and N content of S. sesban. The two hosts showed maximum responses to ammonium sulfate when applied at rates of 20 and 60 mg N kg^{-1} soil for S. sesban and S. rostrata, respectively. However, the addition of 200 mg superphosphate kg^{-1} soil was particularly effective for both hosts. S. rostrata, as a green manure, was superior to S. sesban and other tested legumes in enhancing growth and N content of maize plants.

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