YIELD RESPONSE OF SOME LEGUMINOUS CROPS TO THE STIMULATIVE AND LATE DOSES OF NITROGEN FERTILIZER

By

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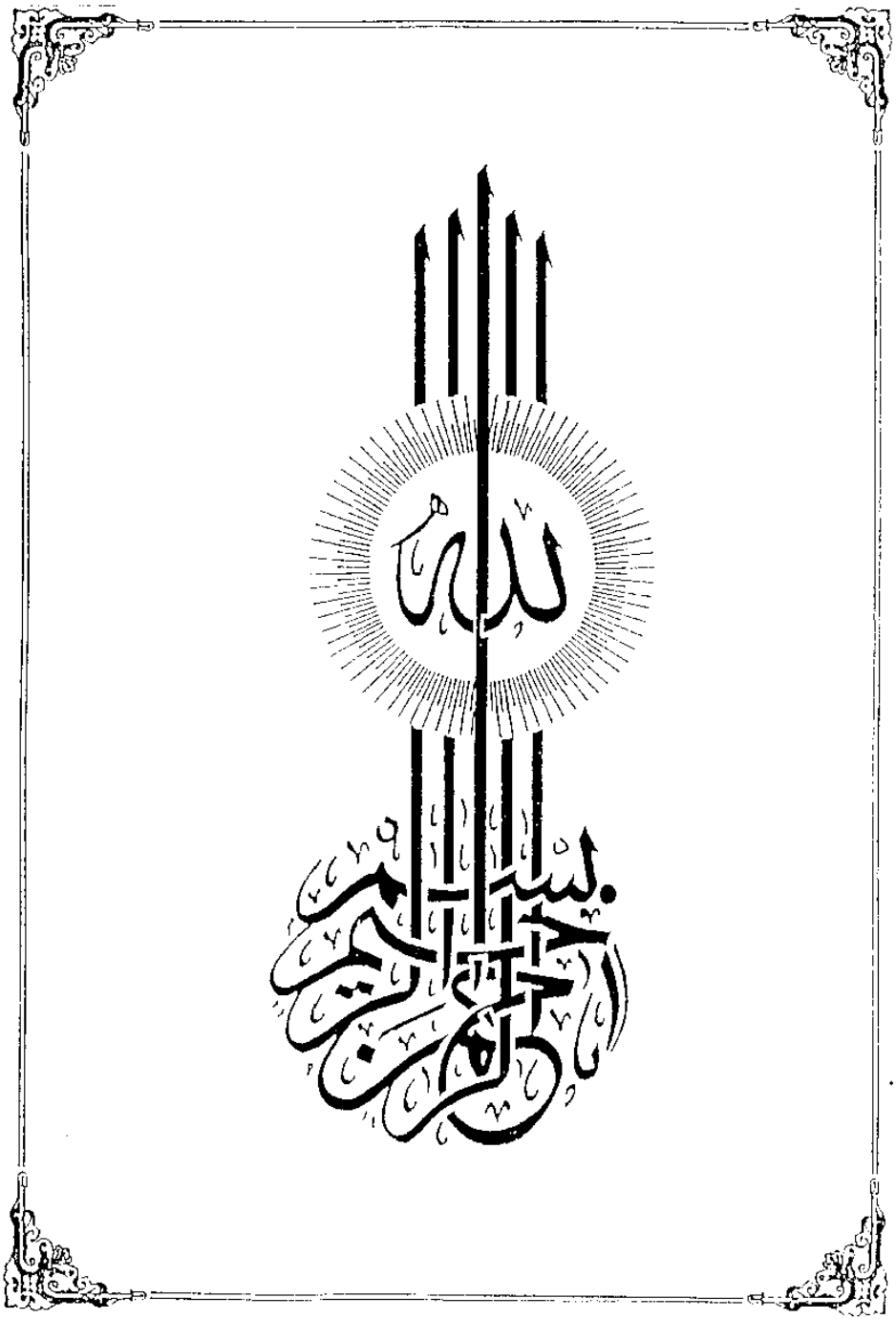

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Abstract

Six field experiments were carried out to study the growth and yield responses of faba bean and chickpea to the stimulative dose of nitrogen fertilizer (0 and 30 Kg N/fad.) and late dose of foliar 2% urea spraying (without, at pod filling, 10 days from pod filling and 20 days from pod filling). The results revealed that adding nitrogen at a rate of 30 Kg/fad. tended to increase plant height, number of branches, number of leaves and number of pods per plant

of faba bean as well as seed yield per fad. and straw yield (ton/fad.).

Foliar spraying with urea lately at pod filling affected positively area of leaves and leaf area index as well as dry weight of both stem and pods and carotenoides concentration in the leaves of faba bean plants. All late foliar spray treatments tended to increase seed yield of faba bean plants.

Number of branches and number of leaves per plant of chickpea increased insignificantly by the stimulative dose of nitrogen at all studied stages. The stimulative dose resulted in lower number of pods of chickpea compared with the control treatment and the same response was shown as for pods yield, seed yield per faddan as well as shelling percentage.

Spraying urea at pod filling treatment surpassed the unsprayed one at 129, 140 and 151 days from sowing for number of branches and number of green leaves of chickpea. Spraying 2% urea at different stages of pod filling outweighted the unsprayed treatment for seed yield and its components of chickpea. Delaying the spraying of urea after 20 days from pod filling showed the larger percentage of protein in seeds of chickpea.

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LIST OF TABLES

Cont.

No. Page

Cont. No. Page

LIST OF FIGURES

Cont.

Cont.
No. Page