

## YIELD AND YIELD COMPONENTS OF SOYBEAN IN RELATION TO RHIZOBIA AND PHOSPHORUS APPLICATION-8

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### ABSTRACT

A two year field experiment on soybean using Rhizobia and phosphorus was conducted during 1983 and 1984 at two locations on soils ranging from sandy loam to silty clay. The functional behaviour of yield components i.e. Number of branches, pods plant<sup>-1</sup> and grain weight greatly responded to improvement in grain yield during both the years. The dependence was increased as a result of seed inoculation and phosphorus application. All the yield components were significantly increased by the two variables where the responses were more pronounced during 1984. The linear increase in grain yield with phosphorus and seed inoculation was the result of integrated effects of these yield components. About 49.8% increase in grain yield with the application of 80 kg P<sub>2</sub>O<sub>5</sub> ha<sup>-1</sup> was observed over control on average of two years. It was evidenced that increases in yield components have been shown to accompany the phosphorus response to further increase the grain yield. The interaction of seed inoculation and phosphorus was significant in the yield components during 1984 and grain yield during both the years where best results were obtained from the inoculated crop with high doses of phosphorus.

### INTRODUCTION

Soybean (*Glycine max* L) has been recently introduced in Pakistan. The crop can be raised successfully on a wide variety of soils and fairly good results can be obtained on a relatively