Conducting Research for the Benefit of Agriculture: Separating Phaseolus vulgaris Seeds into Groups

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By 2050, the world’s population is projected to reach 9 billion people, requiring the growth of twice as many crops. These projections demand more innovative and efficient agricultural practices. This study aims to determine if seeds germinated in small social groups grow more efficiently than seeds germinated in isolation. Specifically, it investigates Phaseolus vulgaris (bush bean) seed growth rates for seeds grown both in isolation and in social groups. To test the hypothesis that the bush bean seeds grown in social groups would exhibit greater growth rates, seeds were separated into two test groups (isolated vs. social groups) and planted in pots. Both test groups were monitored, watered, and measured daily. Growth rates were analyzed through calculated averages. The results showed an increase in the social group’s growth rate for days 12-17 ($P<0.05$). The social pot’s growth rate for these days averaged 44% greater than the isolated pots. These results suggest that bush bean seeds grown in small social groups grow more rapidly two weeks after planting than seeds planted in isolation. Future studies will provide additional details concerning this variety of seed and other plant variety germination responses. Planting seeds in social groups may provide a more efficient method for agriculture to meet the production demand to feed the world’s growing population.

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