

EFFECT OF PLANTING DATES AND SEED SIZE ON PRODUCTIVITY AND QUALITY OF SOME FABA BEAN CULTIVARS

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ABSTRACT

Two field experiments were conducted at Tag AL-Ezz, Agricultural Research Station Farm, Dakahlia Governorate, Agricultural Research Center, Egypt, during 2007/2008 and 2008/2009 seasons to study the effect of planting dates (20th October, 10th November and 1st December) and size of sown seeds (small, medium and large) of some faba bean cultivars (Sakha 1, Masr 1 and Giza 843), as well as, their interaction on yield and its components and seed quality. In addition, a laboratory experiment was carried out at Seed Technology Research Unit in Mansoura, Dakahlia Governorate, Field Crops Research Institute, Agricultural Research Center, Egypt, to some physiological and seed quality of seed resulted from the field experiments.

The main results could be summarized as follows:

- 1-Planting faba bean in the intermediate date (10th November) produced the highest values of seed yield and its components and also high seed quality traits ranked by early (20th October) then late planting dates (1st December).
- 2-Sakha 1 cultivar ranked first whereas Giza 843 and Masr 1 were ranked second and third, respectively in all studied characters.
- 3-The effect of seed size on seed yield and its components and seed quality characters was significant, except for the number of seeds/plant, pod weight, number of seeds/pod and dry weight of seedlings in the second season only. Large size of sown seeds recorded the highest values of all studied characters, followed by medium then small size. There were insignificant differences between large or medium size of seed in some yield component and seed quality as well as seed yield/fed.
- 4-it can be recommended that planting faba bean Sakha 1 cultivar on 10th November with large or medium size of seeds might improve faba bean productivity and seed quality.

Keywords: Faba bean, *Vicia faba* L., planting dates, sowing dates, seed size, cultivars, varieties, yield, quality.

INTRODUCTION

Faba bean (*Vicia faba* L.) is a common staple food in the Egyptian diet, eaten by rich and poor alike. It can be used as a vegetable, either green or dried, fresh or canned. It also used as fodder and forage crop for animals and for increasing available nitrogen in the biosphere.

It is well know that high productivity with good quality of any crop is the final goal of many factors and operations. Thus, this research have been conducted on various agronomic problems such as planting dates, most promising cultivars and seed grading in term of seed size as major factors determining faba bean yield and its components as well as seed quality.