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Short Communication

Occurrence of Tricotyledony in *Vigna radiata*

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Abstract

Present study was carried out to examine the seed germination of Vigna radiata. Total 45 seeds were sown for this. During the course of seed germination test, the occurrence of tricotylednous condition was recorded in one of the 45 seeds of Vigna radiata. It was also noted that the growth of tricotyledonous seedling was slow in all respect in comparison of normal dicotyledonous seedlings.

Keywords: *Vigna radiata*, seed, germination, tricotyledony, seedling.

Introduction

Vigna radiata L. Wildzek. is commonly known as Moong belongs to family Fabaceae (Leguminoseae) sub family-Papilionaceae. It is a multi-branched annual herb growing up to one meter. It has well developed taproot system. It is widely cultivated as kharif and Rabi crop in India. *Vigna radiata* is consumed as whole grains as well as Dal. It is used for making the many dishes. Sprouted seeds are taken by some people as breakfast in the morning. It is also used as a fodder for cattles.

Materials and methods

The healthy seeds of *Vigna radiata* were sown in the garden beds to study the seed germination. A total 45 seeds were sown in well prepared garden beds at our home. A regular irrigation was done to provide proper moist condition for germination of seeds. After starting the seed germination, data on seed germination was recorded from the date of first emergence to the last emergence.

Results and Discussion

During the course of observation of germination and seedling growth, it was noted that, most of the seedlings of *Vigna radiata* were normal, except one seedling which was showing abnormal behaviour. Of these, one seedling was showing three cotyledons, known as Tricotyledony. It was showing the variation in the number of cotyledons. The normal seedlings of *Vigna radiata* have two cotyledons, whereas the tri-cotyledons seedling posses three cotyledons as depicted in Figure-1(a-b). The growth of tricotyledonous seedling was slow in all respect in comparison to normal dicotyledons seedlings. Normally, dicotyledons have two cotyledons. It is a characteristics feature of dicotyledons. The origin of tricotyledony is a rare phenomenon. It presumes that the occurrence of tricotyledons might be due to the genetic anomalies, which may be confirmed by further research. The occurrence of tricotyledony has been reported in various plant species[1-9].

(a)-Seedling with two cotyledons.

(b)-Seedling three cotyledons.

Figure-1(a-b): Showing the variation in cotyledons of *Vigna radiata.*

Conclusion

It is concluded that the origin of tricotyledons is very rare phenomenon in dicotyledonous plants. The occurrence of tricotyledony in *Vigna radiata* might be a genetic anomaly, which will be confirmed by further research. Thus present study may be provides very interesting and new aspect among the researchers.

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