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# Study of overexprexpression of the *BnFUL* gene in transgenic oilseed rape

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## A B S T R A C T

Oilseed rape is one of the important oil plants that its cultivation has been expanded in Iran in recent years. Seed shattering before and during harvesting is a problem of cultivation of this plant can causes up to 50% yield decrease depending on the environmental conditions. Production of seed shatter tolerant plants can increase the yield. Different genetic and environmental factors can affect this trait. The *FUL* gene is one of the genetic factors in that its over expression could prevent silique opening and seed shattering. Rapeseed transgenic plants of three cultivars containing the *BnFUL* gene were produced and molecular studies were carried out on $T_2$ generations transgenic plants using PCR, Southern blotting and real time PCR. PCR showed that the *BnFUL* transgene has been inserted in the transgenic plants in addition to the internal gene. The copy number of transgene in transgenic and control plants were analyzed by Southern blotting which confirmed presence of at least one intact copy of the transgene in transgenic plants. Real time PCR showed that *BnFUL* gene expression in transgenic plants in comparison with control plants has been increased. Differences between the expression of transgenic plants in different lines could be because of position effect and copy number.

## Key Words

Oilseed Rape, Transgenic Plant, *BnFUL* Expression, Copy Number



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