

# FAO/IAEA International Symposium on Plant Mutation Breeding and Biotechnology



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## ESTABLISHMENT OF WHEAT - THINOPYRUM ELONGATUM 7E CHROMOSOME TRANSLOCATION LINES WITH FUSARIUM HEAD BLIGHT RESISTANCE BY RADIATION

*Thinopyrum elongatum* is one of the important relatives of wheat. It is favoured by many researchers for the disease resistant genes that exist in its E genome. Some studies have shown that the 7E chromosome of *T. elongatum* contains resistance genes related to Fusarium head blight (FHB). Therefore, establishment of wheat -*T. elongatum* 7E chromosome translocation lines with FHB resistance is very important. This study was conducted to establish (wheat) *Triticum* sp./*T. elongatum* 7E chromosome translocation lines from Yangmai16 × DS7E(7A or 7B or 7D) based on <sup>60</sup>Co radiation induced mutation. Then, we selected the translocation lines by screening for FHB resistance, *T. elongatum* 7E chromosome with specific molecular markers and genomic in situ hybridization (GISH). Finally, we obtained the wheat/*Th. elongatum* 7E chromosome translocation lines with FHB resistance and found through further study, that the FHB resistance gene(s) might be located on the long arm of chromosome 7E of diploid *T. elongatum*. The establishment of wheat /*T. elongatum* 7E chromosome translocation lines with FHB resistance will provide important resistant genes and genetic stocks for wheat breeding.

### Country or International Organization

Chinese Atomic Energy Agency

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