5th IMPB INTERNATIONAL MEETING ON PLANT BREEDING

INTEGRATED DATA ANALYSIS AS A TOOL TO REVOLUTIONIZE PLANT BREEDING

TRANSLOCATION 2NS/AS IN WHEAT GENOTYPES SAMPLES FROM UFV BANK

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Introduction

Wheat blast is caused by the fungus *Magnaporthe oryzae*, which has a great impact on the yield and quality of wheat grains.

There is a chromosomal segment that confers resistance to blast:

2NS/ AS translocation

From *Triticum ventricosum* (2NS) which was translocated to chromosome 2AS of the common wheat lineage VPM1.

Objective

Is to identify the presence of the 2NS/AS translocation in a panel of 10 cultivars from UFV Wheat Program Bank.

Materials and methods

DNA from 10 genotypes were extracted → **VENTRIUP and LN2 primers were used to identify the translocation.**

Amplification was performed in a thermocycler, with 60 ng of DNA; 2.0 mM MgCl2; 0.25 µM dNTP; 0.35 µM primer; 1 U of Taq DNA polymerase (*Invitrogen*). → **The amplification product was analyzed on a 2% agarose gel.**

Results and discussion

All tested genotypes showed amplification of the 259 base pair fragment indicating the presence of the 2NS/AS chromosome segment in their genome (Figure 1.)

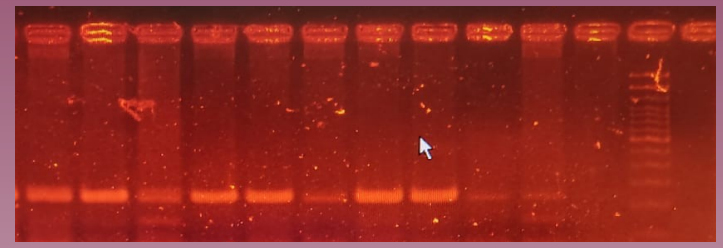

Figure 1. Amplification of 10 individuals in the VENTRIUP/ LN2 primer.
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However, although most breeding programs use translocation as a source of resistance, it has shown susceptibility in certain environments.

Conclusion

It is necessary to improve the mapping, searching for new sources of resistance, as the durability of 2NS/2AS translocation resistance is not fully effective since the aggressiveness of the fungus becomes increasingly greater over the years.

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