

OA5. Segregation of IRS chromosome segment in plants regenerated from anther culture of F1 hybrids in wheat (*Triticum aestivum* L.)

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Objectives

To confirm positive effect of IRS chromosome segment on green plant regeneration, regenerants from anther culture of F1 hybrids crossed with Seri82 (a cultivar containing IRS chromosome segment) were analysed.

Materials and Methods

Plants regenerated from anther culture of reciprocal F1 hybrids (Seri82/Suwon278 and Suwon278/Seri82) and others (Seri82/Geurumil, Seri82/Olmil and Seri82/Geumgang) were screened out IRS chromosome segment by PCR. The amplification reactions were conducted under the conditions of rye genome-specific RAPD markers (Operon C10 and H20).

Results and Discussion

In one reciprocal combination(Seri82/Suwon278 and Suwon278 /Seri82), the frequency of IRS chromosome segment in green plants was seen in 85 plants(47%) out of 179 plants. The frequency in albino plants was seen in 63 plants(47%) out of 133 plants. The ratio of IRS was 1 : 1. IRS chromosome segment did not affect the ratio of regenerated green plant in this combination.

For others of F1 hybrids crossed with Seri82, the frequency of IRS chromosome was seen in 36 plants(78%) out of 46 regenerants. IRS chromosome affected the ratio of green plant regenerated from anther culture in these combinations.

These results were concluded that IRS chromosome segment should affect green plant regeneration depending on combinations.

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