

The use of a genome substituted form of Avrodes to expand the genetic diversity of common wheat

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The synthetic form of Avrodes (BBAASS) and secondary synthetic recombinant forms (RS- forms) was used to obtain of the lines with resistance to diseases. Using the C-banding and FISH methods 50 lines have been studied to date. Rearrangements mainly affected the chromosomes of the D genome. In four lines obtained using RS-forms the transfer of genetic material from two species simultaneously was established. Translocations of T2DS.2DL-2UL from *Ae. umbellulata*, translocation T7SS.7SL-7DL, T5BS.5BL-5SL and substitution 1S(1B) from *Ae. speltoides* has been determined in line 4626. Line 3379 has translocation T7DL.7DS-7US from *Ae. umbellulata*, translocations T1DS.1DL-1SL, T2DS.2DL-2SL, T5BS.5BL-5SL and the substitution of 4S(4D) from *Ae. speltoides*. Translocations of T5BS.5SL from *Ae. speltoides* and T5DL.5DS-5US from *Ae. umbellulata* were detected in line 4938 p-17. Substituted chromosomes 6D(6Dt) from *Ae. tauschii* and 7D(7S) from *Ae. speltoides* were found in the 5791n17 line. The resulting translocations and chromosome substitution are new. Translocations on chromosomes 2A, 1D, 2D, 3D and 5D obtained from *Ae. speltoides* also belong to the new ones.

The main publications of authors on the subject of the abstract:

Давоян, Р.О. и др. Создание и изучение интрогрессивных линий мягкой пшеницы, полученных на основе синтетической формы RS7 // Вавиловский журнал генетики и селекции. 2019. Т. 23. № 7. С. 827-835.

Давоян, Р.О. и др. Использование синтетической формы RS5 для получения новых интрогрессивных линий мягкой пшеницы // Вавиловский журнал генетики и селекции. 2021. Т. 25. № 7. С. 770-777.