

=====**CONDITION AND FUNCTIONING OF AGROECOSYSTEMS**=====

AND THEIR COMPONENTS

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**ADAPTIVENESS OF SPRING WHEAT BASED ON SOME PARAMETERS OF GRAIN
QUALITY OF THE NEW VARIETIES FROM THE FAR EASTERN BREED**

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In this article we present the results of long-term wheat breeding aimed at creating varieties of spring soft wheat that can adapt to the specific environment of the Amur Region which is located in the area of risky agriculture. We conducted a comparative analysis of grain quality and adaptiveness properties (compensatory ability and stress tolerance) of 30 new varieties of spring wheat from the competition nursery. Experiments were conducted from 2020 to 2022, according to the standard method in the Research Laboratory of Grain Breeding of the Far Eastern State Agrarian University (Rus. “Dalnevostochny GAU” or “DalGAU”). It was revealed that the variety from the combination Long 98-4723 x Altayskaya 530 was the most valuable by the complex of its technological properties. The variety from the combination Krasa x DalGAU 1 had the best compensatory ability. The variety from Altayskaya 325 x Amurskaya 1495 had a good stress tolerance by all its properties. For the last two combinations the pollinators were from Amur breed. We have also identified the most promising regions of origin of varieties for their potential use as parental forms in hybridization. Chinese and Siberian varieties offer the best grain quality parameters for the Amur Region, and the majority of promising samples were created with these two varieties. Chinese varieties give a good compensatory ability to the next generations in vitreousness, grain unit and gluten content, but a low stress tolerance in gluten content. The Altai varieties produce generations with high gluten content, good compensatory ability and high stress tolerance.

Keywords: variety, 1000 grain weight, grain unit, grain vitreousness, gluten, α -Amylase, Hagberg falling number.

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