

**CHANGE OF ECONOMICALLY VALUABLE CHARACTERISTICS OF SPRING GRAIN CROPS  
DEPENDING ON CULTIVATION CONDITIONS**

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Spring barley is the second (after wheat) most important and widespread grain crop in Russia. Barley grain is widely used everywhere for feed (over 75%), food (15%) and brewing (8%) purposes. Durum wheat is currently considered as an indispensable raw material in the food industry. Especially popular are such cereals as couscous and bulgur, which are made of this crop grain. The paper presents the results of the analysis of yield formation and grain quality of spring durum wheat and spring barley in the conditions of the southern forest-steppe of Western Siberia. The objects of the study were varieties of spring durum wheat (Zhemchuzhina Sibiri and Omskiy korund) and spring barley (Omskiy 90 and Beatris). Sowing was conducted on May 7, 14, 21, 28 and June 4. Biochemical assessment of the grain quality indicators included contents of raw gluten, protein, starch, raw fat, glassiness, nature in the grain. Such indicators as the mass of 1000 grains, vitreousness, gluten and protein content as well as the color of dry pasta have increased when spring durum was sown in the rotation after bare soil on May 7. The increased indicators of yield, grain nature and color of dry pasta were noted when sowing was done after grain from 14 to 28 of May. The indicators of yield and protein content have increased when spring barley was sown on May 14; the indicators of the protein content and oil content of the grain increased when the sowing was done on June 4. Sowing in the crop rotation after bare soil contributed to an increase in the yield and grain quality of both spring durum wheat and spring barley varieties.

**Key words:** durum wheat, barley, sowing tim, yield, quality.