

Annotation

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Yield and sowing qualities of spring wheat seeds depending on the fractional composition of seeds and fertilizers

The full realization of the genetic potential of modern varieties is only possible with the use seeds of high sowing qualities and fruitful properties for sowing. Seed material of poor quality does not provide adequate density of crops which leads to lower productivity. The best solution to this problem is to improve quality of seeds which will prevent massive losses even under adverse climatic conditions. The requirements of DSTU 4138.2002 provide the use of lower sieves for spring wheat with the size of 1.7-20.0 mm for certified seeds. But in fact, in the production lower sieves are used at seed purifiers for obtaining larger seed fractions.

The aim is to study the dependence of seed production and sowing qualities of spring wheat seeds on the fraction of seeds and fertilizers followed by the determination of the optimal fractional composition of seeds and varieties that are being studied, as well as mineral nutrition background. In the process of studies special and general scientific research methods are used: a field method that complements the laboratory-based one; mathematical and statistical research methods.

The subject of research is Rannia 93 and Nedra varieties of spring wheat; doses of fertilizers are $N_{30}P_{50}K_{60}$ u $N_{60}P_{50}K_{60}$; seed fractions 1.7 u > mm, 2.0 u > mm, 2.2 u > mm (check variant) and 2.4 u > mm.

Sowing qualities of grown seeds are substantially independent of the size of sown seed material (fractional composition). Increasing the dose of nitrogen fertilization contributes to the yield and thousand-seed weight but adversely affects the laboratory germination and germination readiness. The highest seed yield of spring wheat is formed at fraction sowing 2.2 u > mm. This indicator amounted to 3.47-3.74 and 3.53-3.86 t/ ha, respectively, of Rannia 93 and Nedra varieties against applied $N_{30}P_{50}K_{60}$ u $N_{60}P_{50}K_{60}$ before sowing.

Key words: *spring wheat, seed fraction, fertilizers, variety, sowing qualities, yield.*