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CONDUCTING PRIMARY SEED PRODUCTION WORK FOR THE RYE VARIETY "VAKHSH-116"

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Abstract

Rye belongs to the Poaceae family, genus Secale, and includes seven species, of which the species Secale l is cultivated as an annual. The root system is well developed. Rye is mainly a fall crop, but spring forms are also found. Due to the long stalk of rye, it is more prone to lodging.

Keywords

Rye, early maturing, ears, straw, fodder crop, variety testing, weight 1000 grains.

Introduction. Rye is considered a crop for all-purpose use. Rye is mainly used as a fodder crop. For this, grain and green mass are used. Before heading, the green mass is rich in nutrients. During the heading and flowering period, the protein content decreases, and the AEM increases. On the farm, straw is widely used for weaving baskets, hats, and in animal husbandry. In addition, various types of bread are baked from rye flour. These loaves are not inferior to wheat bread in terms of nutritional value. Rye grain contains an average of 13% protein, 65.5% starch, 1.7% fat, 2.2% tissue, 5% sugar, and 10% ash. Rye grain is rich in trace elements, such as manganese, zinc, boron, aluminum, iodine, bromine, fluorine, cobalt, molybdenum, cesium, and copper.

The cultivated rye plant S.segateble l originates from the wild field jaydari species. Modern cultivated rye is wild field rye obtained through centuries of selection. This is what N.I. Vavilov said about this. "Wild grass, despite human desire, became a cultivated crop on its own."

Rye germinates at 6-12°C and below, overwinters well, and can withstand temperatures down to 23°C. Rye tillers well at 12°C. The sum of active temperatures for seed germination is 52°C, from

germination to tillering 67°C, and until the development of the sixth stem 300°C. The sum of active temperatures for early-ripening varieties is 1000-1700°C, for medium-ripening varieties 1200-1800°C, and for late-ripening varieties 1300-1850°C.

Rye is a moisture-demanding plant, requiring 50-70% water absorption relative to its weight for seed germination. During the growing season, rye's water demand increases during the heading phase and decreases during the ripening phase. Rye absorbs nutrients differently depending on the plant's condition, weather conditions, soil composition, cultivation technology, and the biological characteristics of the variety.

Winter rye does not choose soil. Winter rye yields high crops in nutrient-rich soils with good aeration. Rye develops better in light loamy soils than in heavy soils.

Morpho-biological description of the rye variety "Vakhsh-116."

In Uzbekistan, the Vakhsh-116 rye variety is included in the State Register. It is sown as an intermediate crop on irrigated lands.

The species variety is vulgare, 140-150 cm tall, lodging-resistant. The spike is white, prismatic, 14-20 cm long, with 16 spikelets located on 10 cm of spike. The weight of 1000 grains is 18-20 g. During variety testing, a grain yield of 67.9-27.3 c/ha was obtained. Early-ripening. The growing season was 179 days when sown for grain and 163 days when grown for green mass. Brown rust and powdery mildew are moderately susceptible. The bush grows upright, tall, wide, with a gathered panicle, grayish-bluish, 25-30 cm long. The grain is bluish.



Figure 1. Variety "Vakhsh-116"

In the autumn of 2017, a selective nursery of the "Vakhsh-116" rye variety was created on an area of 1 hectare. In 2018, two field inspections were conducted in this nursery, and varietal indicators were studied. It was established that the variety indicator was at the required level, and 1000 individual samples were collected from the selection nursery.

In the selection nursery, 1000 plants were studied by stem height (Table 1).

Table 1

Indicators of stem density of the "Vakhsh-116" rye variety

Variety name	k=10 sm						n	*X*±*Sx*	δ	*Cv* %
	110-120	121-130	131-140	141-150	151-160	161-170				
Vakhsh-116	120	158	185	198	188	151	1000	141,3±0,5	15,9	11,3

When studying the height of the main stem, plants ranging from 1.1 m to 1.7 m were found. In them, the average indicator was 141.3 cm, the coefficient of variation was 11.3%.

In conclusion, as a result of the seed production work carried out, 4.35 tons of elite seeds were produced from the "Vakhsh 116" rye variety in 2018.

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