

## **THE EFFECT OF MOWING PERIODS BASED ON GRAIN MOISTURE ON SEED QUALITY**

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**Abstract:** The article presents the results of a study on the quality of seed grain based on the determination of the germination capacity of winter cereal crops grown in different regions and harvested at different times in laboratory conditions.

**Key words:** seed, germination, quality, wax ripening, full ripening.

Of the seed dry the output is this of seeds known one dry exit under the circumstances known time between normal seedling harvest to do ability [1]. It is a percentage with measured ( raised of seeds planted of seeds general to the thigh ratio as ). Seed germination is usually determined in two ways: laboratory germination is determined in laboratory conditions and is indicated in the seed passport; field germination is determined directly by the number of shoots in the field, which in almost all cases is lower than in the laboratory. The determination of exactly 100% of seedlings simplifies the method. If 5-10% of the seeds do not germinate beforehand, it is considered mathematically accurate [2].

A.G. Matveeva noted that winter wheat seeds collected at the beginning of wax ripening have 85% germination after crushing within the first 3 days, and 93% during full ripening. Therefore, in order to obtain high-quality seeds of the new crop, they should be collected at the stage of full ripening. After harvesting, the seeds should be carefully sorted before drying [3]. Drying for 5-7 hours, depending on the humidity, is advisable. N.V. Sashnina noted that the field germination of spring wheat seeds depends on the time of harvest and the mass of 1000 seeds. In wheat varieties of Amur selection, the most complete seeds with a mass of 1000 grains of 28.8 - 29.0 g were obtained 22-34 days after fertilization. The factor determining field germination in the studied varieties under successful germination conditions is the mass of 1000 seeds, and due to the high mass of 1000 seeds, the maximum field germination of seeds reaches 68.7 - 71.2% [4].

In our research, the quality of seed grain was determined based on the determination of the fertility of autumn grain crops grown in different regions and harvested at different times in laboratory conditions. It is known that the post-harvest physiological maturation period of the grains of autumn grain crops was also different. Therefore, research work was carried out on the germination of varieties in laboratory conditions and after passing the physiological period full of germination energy.

The conducted analyzes show that harvesting with regard to grain moisture has an effect on the germination of winter soft wheat varieties in laboratory conditions. In the 1st harvest of the studied varieties (grain moisture content 20-22%), the fertility of the Yaksart variety was 80% in the sub-mountain areas, 76% in the sub-desert area, and 70% in the desert area. In the Krasnodarskaya-99 variety, the harvest in the 1st term was 82% in the mountain region, and in the desert region, the fertility decreased to 70% . Therefore, it can be noted that the incomplete ripening of the varieties leads to the incomplete formation of the grain husk, and the grain does not germinate if it has not passed the physiological period.

According to the results of the research, in the first period of harvesting with 20-22% grain

moisture, the germination rate of Yaksart variety was 80%, Krasnodarskaya-99 variety was 82%, Selyanka variety was 85%, Gozgon variety was 84%, and Turkestan variety was 79%. In the pre-desert areas, this indicator is relatively lower, and Yaksart variety had 76% results in the 1st period (grain moisture content 14-16%), Krasnodarskaya-99 variety 74%, Selyanka variety 81%, Gogon variety 82%, Turkestan variety 74%.

In the foothills, the first harvest period showed a germination rate of 68-78% for varieties, and the germination rate of wheat harvested at 20-22% moisture content was below the baseline. Such a germination rate leads to a decrease in the seed grade, which in turn leads to a decrease in economic efficiency indicators and profitability levels.

In the course of our research, when the grain moisture content of the studied varieties was determined from the harvest in the 2nd period with a grain moisture content of 14-16%, when determining the germination capacity of the grain, it was determined that the germination capacity was 97-99% in the sub-mountain areas, 98-99% in the sub-desert areas, and 97-99% in the desert areas (Table 1).

Table 1

**Effect of harvest time and cultivation area on grain fertility**

Harvest dates based on grain moisture	Name of the species	Accuracy, %		
		Desert area	Steppe region	Foothills
Harvesting in the 1st term, grain moisture 20-22%	Jaxart	80	76	70
	Krasnodar skaya -99	82	74	68
	Peasant	85	81	70
	Gozgan	84	82	78
	Turkestan	79	74	70
Harvesting in the 2nd period, grain moisture 14-16%	Jaxart	98	98	98
	Krasnodar skaya -99	98	98	97
	Peasant	97	98	97
	Gozgan	98	99	99
	Turkestan	99	98	99
Harvesting in the 3rd period, grain moisture 10-12%	Jaxart	96	95	95
	Krasnodar skaya -99	95	95	93
	Peasant	95	94	93
	Gozgan	96	95	94
	Turkestan	96	96	94
Harvesting in the 4th period, grain moisture 8-9%	Jaxart	89	87	87
	Krasnodar skaya -99	89	87	87
	Peasant	91	88	88
	Gozgan	91	89	90
	Turkestan	91	89	88

The highest germination rate in all three regions, harvesting at an optimal moisture content of 14-16%, eliminates the occurrence of negative phenomena such as a decrease in seed quality indicators. The germination rate, taken from the 3rd harvest with a grain moisture content of 10-12%, was about 90-95% in all three soil-climatic regions, which led to a 4-5% seed loss compared to the second harvest. It was found that the germination rate of the studied varieties at the 4th harvest (8-9% moisture) was 89-91% in the foothills, or 8-9% less than in the second harvest, in the foothills, or 10% less than in the second harvest, and in the desert, 87-90%, or 9-10% less than in the second harvest.

In conclusion, it can be said that timely harvesting of the crop at an optimal time of grain moisture content of 14-16% is closely related to grain germination. In all three regions, the highest germination is achieved, and harvesting grain at an optimal moisture content of 14-16% eliminates the occurrence of negative phenomena such as a decrease in seed quality indicators. To ensure high seed germination, it is recommended to harvest at an optimal time - when the variety is fully ripe.

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