

Supplementary Materials

Table S1. Weather conditions of the growing season of 2022 in comparison with long-term observations.

Month	Decade	Air temperatures, °C				Precipitation, mm		Sum of average daily air humidity deficits, hPa
		average daily		maximum	minimum	2022 г.	long-term average	
		2022 г.	long-term average					
May	1	11,0	13,7	21,0	1,0	9,0	9,0	90
	2	11,7	15,4	19,0	5,0	41,0	9,0	40
	3	13,8	16,7	27,0	3,0	77,0	9,0	66
	month	12,2	15,3	27,0	1,0	127,0	27,0	196
June	1	18,7	18,9	28,0	10,0	13,0	12,0	90
	2	19,9	20,8	32,0	9,0	3,5	12,0	110
	3	20,7	21,7	34,0	5,0	1,0	13,0	130
	month	19,8	20,5	34,0	1,0	17,5	37,0	330
July	1	19,3	22,2	31,0	11,0	24,0	13,0	100
	2	25,8	21,7	35,0	15,0	0	13,0	180
	3	22,6	22,3	32,0	11,0	16,0	13,0	143
	month	22,6	22,1	35,0	11,0	40,0	39,0	423
August	1	24,6	21,5	34,0	15,0	0	11	180
	2	23,0	20,1	35,0	8,0	0	10	190
	3	24,8	18,5	35,0	12,0	0	11	231
	month	24,1	20,5	35,0	8,0	0	32	601
TOTAL		x	x	35,0	1,0	184,5	128	1550

Table S2. Duration of interstage periods at growing season of spring wheat cultivars in 2022

Cultivar	Interstage periods, days									
	Sowing - seedlings	Seedlings - 3rd leaf	3rd leaf - tillering	Tillering - booting	Booting - heading	Heading – milky stage	Milky stage - soft dough stage	Soft dough stage - hard dough stage	Hard dough stage - full ripening stage	Growing season (seedlings - full ripeness)
Plowing										
Uchitel	12	12	5	12	16	14	7	15	4	85
Tulaikovskaya zolotaya	12	12	5	12	17	13	7	17	6	89
Orenburgskaya 30	12	12	5	12	17	13	7	16	4	86
Ulyanovskaya 105	12	13	6	14	19	14	6	13	6	91
Orenburgskaya 10	12	12	5	12	17	15	7	14	5	87
Bezenchukskaya 210	12	12	5	12	16	15	7	14	7	88
Nonmoldboard loosening										
Uchitel	12	12	5	12	16	14	7	15	4	85
Tulaikovskaya zolotaya	12	12	5	12	17	13	8	17	6	90
Orenburgskaya 30	12	12	5	12	17	13	7	16	4	86
Ulyanovskaya 105	12	13	6	14	19	14	6	13	6	91
Orenburgskaya 10	12	12	5	12	17	15	7	14	5	87
Bezenchukskaya 210	12	12	5	12	16	15	7	14	7	88

First sowing date	Orenburgskaya 10	Fallow	10 ears	45 kernels
		Nonmoldboard loosening	10 ears	45 kernels
		Plowing	10 ears	45 kernels
	Orenburgskaya 30	Fallow	10 ears	45 kernels
		Nonmoldboard loosening	10 ears	45 kernels
		Plowing	10 ears	45 kernels
	Ulyanovskaya 105	Fallow	10 ears	45 kernels
		Nonmoldboard loosening	10 ears	45 kernels
		Plowing	10 ears	45 kernels
	Bezenchukskaya 210	Fallow	10 ears	45 kernels
		Nonmoldboard loosening	10 ears	45 kernels
		Plowing	10 ears	45 kernels
	Tulaikovskaya zolotistaya	Fallow	10 ears	45 kernels
		Nonmoldboard loosening	10 ears	45 kernels
		Plowing	10 ears	45 kernels
	Uchitel	Fallow	10 ears	45 kernels
		Nonmoldboard loosening	10 ears	45 kernels
		Plowing	10 ears	45 kernels

Figure S1. Evaluation schema of the kernel indicators depending on cultivar and tillage practice.

First sowing date	Ulyanovskaya 105	Plowing	10 ears	45 kernels
	Bezenchukskaya zolotistaya	Plowing	10 ears	45 kernels
	Luch 25	Fallow	10 ears	45 kernels
	Orenburgskaya 10	Fallow	10 ears	45 kernels
Second sowing date	Ulyanovskaya 105	Plowing	10 ears	45 kernels
	Bezenchukskaya zolotistaya	Plowing	10 ears	45 kernels
	Luch 25	Fallow	10 ears	45 kernels
	Orenburgskaya 10	Fallow	10 ears	45 kernels

Figure S2. Evaluation schema of the kernel indicators depending on the sowing date, cultivar and tillage practice.