

Analytical material

Space monitoring data on crop production for 2024

Data sources: JSC "National Company "Kazakhstan Garysh Sapary", subordinated to the Ministry of Digital Development, Innovations and Aerospace Industry of the Republic of Kazakhstan (hereinafter – MDDIAI).

Legal basis for obtaining data: In accordance with paragraphs 19-2 of Article 12 of the Law of the Republic of Kazakhstan "On State Statistics", the competence of the Bureau of National Statistics of the ASPR of the Republic of Kazakhstan (hereinafter – the Bureau) includes receiving and using data on a gratuitous basis from the relevant authorized state bodies, organizations, formed in the implementation of public orders and public-private partnerships, including data of remote sensing of the Earth, in the implementation of statistical activities;

Space monitoring data for 2024 are provided by JSC "National Company "Kazakhstan Garysh Sapary" on the basis of the Bureau's request sent to ICRIAP (out. № 6-20/462-I of 09.03.2023). JSC NC "Kazakhstan Garysh Sapary" (hereinafter – JSC KGS) provides the following information: areas of fallow fields, sown areas, pasture lands and forecast values of yields of certain grain crops.

Information systems used: Space monitoring of rangelands is displayed on geoservice pasture.gharysh.kz, crop production - on agro.gharysh.kz

Methodological approaches

Satellite-based estimation of predicted yield and gross yield is based on a regression linear model of grain crops and is based on the combination of meteorological and statistical parameters with satellite and ground measurements. Vegetation indices were used as Earth remote sensing (hereinafter – ERS) data, the first of which is NDVI-Normalized Difference Vegetation Index-an index that shows reliable information about the state of agricultural land, namely the amount of photo synthetically active biomass. Using the results of calculations of this index allows assessing the dynamics of changes in the state of crops, their growth and development rate, vegetation period, as well as the impact of negative phenomena (infestation of plants with pathogens, natural disasters, etc.). The next indicator is the vegetation health index VHI (Vegetation Health Index). The index is based on a combination of two indices VCI (Vegetation Condition Index), which characterizes the oppression of vegetation cover and the temperature regime index TCI (Temperature Condition Index).

Table 1

Area of steam fields

ha

Name of the region	All categories of households	Including	
		agricultural enterprises	individual entrepreneurs and peasant or private farms
Republic of Kazakhstan	1 621 085,3	1 151 497,8	469 587,5
Abay	16 011,0	3 041,4	12 969,6
Akmola	377 224,3	314 703,9	62 520,4
Aktobe	27 850,8	7 176,0	20 674,8
Almaty	17 113,7	7 144,6	9 969,1
Batys Kazakhstan	42 445,3	15 096,4	27 348,9
Zhambyl	17 286,6	1 637,5	15 649,1
Zhetisu	10 565,1	367,0	10 198,1
Karagandy	60 828,3	44 867,1	15 961,2
Kostanay	555 696,4	393 113,7	162 582,7
Pavlodar	108 072,0	65 742,2	42 329,8
Soltustik Kazakhstan	343 111,2	282 173,9	60 937,3
Turkistan	35 218,9	10 233,5	24 985,5
Ulytau	481,6	-	481,6
Batys Kazakhstan	8 488,2	5 719,4	2 768,8
Shymkent city	691,8	481,2	210,6

Table 2

Sown area of agricultural crops (spring crops) with indication of their condition

Name of the region	Sown area, ha	State of agricultural crops
--------------------	---------------	-----------------------------

		very poor	poor	satisfactory	good	excellent
Republic of Kazakhstan	14 237 131,9	35 682,0	116 242,6	1 619 359,1	8 969 184,4	3 496 663,8
Abay	167 978,2	21,2	-	844,6	69 455,9	97 656,5
Akmola	4 365 655,7	13 083,2	79 076,7	524 628,9	2 966 887,1	781 979,8
Aktobe	278 551,1	-	38,6	92 086,6	177 346,1	9 079,8
Almaty	136 609,7	7,3	10,2	11 914,7	88 048,8	36 628,7
Batys Kazakhstan	278 696,7	-	819,2	60 029,5	192 260,2	25 587,8
Zhambyl	312 294,6	25,9	92,0	26 668,1	257 541,0	27 967,6
Zhetisu	166 980,5	-	-	5 281,4	119 091,2	42 607,9
Karagandy	806 015,6	-	-	27 938,5	586 542,4	191 534,7
Kostanay	3 440 690,0	2 431,9	12 552,3	495 407,3	2 407 102,7	523 195,8
Kyzylorda	63 625,3	78,2	99,5	10 560,5	36 260,4	16 626,7
Pavlodar	884 353,5	-	1 893,0	56 202,4	569 256,7	257 001,4
Soltustik Kazakhstan	2 853 696,1	536,8	6 281,8	221 666,4	1 320 157,6	1 305 053,5
Turkistan	307 566,5	19 448,1	15 379,3	85 343,4	143 364,0	44 031,7
Ulytau	17 827,9	49,4	-	239,2	12 480,5	5 058,8
Batys Kazakhstan	151 638,7	-	-	369,5	18 910,1	132 359,1
Shymkent city	4 951,8	-	-	178,1	4 479,7	249,4

Table 3

Area of pasturelands by their condition

Name of the region	Area of pastureland, ha	Area of pasturelands by condition, ha					
		no vegetation	very poor	poor	satisfactory	good	excellent
Republic of Kazakhstan	80 173 234,7	355 366,0	23 403 488,5	35 046 716,0	17 247 983,5	3 881 342,4	238 338,3
Abay	7 620 107,6	1 713,0	725 821,0	4 031 433,1	2 254 837,9	571 510,5	34 792,1
Akmola	4 106 876,4	6 533,3	42 274,6	1 064 426,0	2 562 695,9	429 192,2	1 754,4
Aktobe	11 639 162,5	73 408,7	4 397 763,9	6 287 672,1	832 264,5	47 918,4	134,9
Almaty	3 383 977,6	6 720,1	1 319 261,7	1 052 275,4	661 024,7	321 119,2	23 576,5
Atyrau	2 480 005,0	20 900,8	1 424 980,7	971 886,8	55 284,7	6 928,3	23,7
Batys Kazakhstan	6 360 045,0	7 340,5	908 111,2	4 650 597,7	721 700,3	71 638,4	656,9
Zhambyl	3 431 229,3	486,4	1 132 823,6	1 570 739,6	586 725,1	139 628,2	826,4
Zhetisu	3 734 117,0	6 958,5	1 700 865,0	1 146 478,1	546 773,0	301 094,4	31 948,0
Karagandy	9 992 497,4	8 331,2	2 672 317,1	4 661 473,5	2 356 495,6	292 582,6	1 297,4
Kostanay	4 417 740,4	44 806,0	218 033,5	1 677 878,6	2 192 514,7	282 187,2	2 320,4
Kyzylorda	1 989 621,5	5 970,4	1 487 175,9	334 076,3	155 670,0	6 728,9	-
Mangystau	2 352 955,2	9 507,5	2 243 013,2	99 623,3	730,9	80,3	-
Pavlodar	4 705 442,2	3 667,4	50 839,4	3 004 052,1	1 564 149,8	82 611,0	122,5
Soltustik Kazakhstan	2 095 057,8	150 361,9	63 775,7	156 756,6	1 290 964,0	431 189,9	2 009,7
Turkistan	3 256 503,4	1 767,4	1 862 235,0	1 030 665,5	319 731,9	42 103,6	-
Ulytau	5 929 400,5	5 620,1	2 901 959,6	2 683 213,4	312 777,1	25 830,3	-
Shygys Kazakhstan	2 678 394,9	1 272,8	252 237,4	623 438,4	833 586,4	828 984,5	138 875,4
Astana city*	-	-	-	-	-	-	-
Almaty city	24,5	-	-	-	10,0	14,5	-
Shymkent city	76,5	-	-	29,5	47,0	-	-

* There are no agricultural and sin the category of land fund "Agricultural lands".

Table 4

Wheat own area with indication of their condition

Name of the region	Sown area, ha	State of agricultural crops				
		very poor	poor	satisfactory	good	excellent
Republic of Kazakhstan	11 218 872,3	13 488,9	88 690,1	1 260 988,2	7 190 647,5	2 665 057,6
Abay	133 939,8	21,2	-	844,6	53 144,4	79 929,6
Akmola	3 679 221,9	11 500,8	70 611,5	465 896,1	2 493 098,0	638 115,5
Aktobe	209 138,2	-	38,6	60 447,4	142 513,5	6 138,7
Almaty	41 032,1	-	-	3 976,4	24 241,6	12 814,1
Batys Kazakhstan	218 993,4	-	819,2	45 963,6	151 641,5	20 569,1
Zhambyl	175 352,8	25,9	21,0	16 654,7	145 636,6	13 014,6
Zhetisu	59 844,4	-	-	531,2	43 180,9	16 132,3
Karagandy	656 546,1	-	-	20 354,9	502 241,3	133 949,9
Kostanay	2 981 661,1	1 491,9	11 243,9	420 105,1	2 101 929,2	446 891,0
Kyzylorda	7 417,6	-	-	1 186,4	3 484,6	2 746,6
Pavlodar	697 278,8	-	1 893,0	43 511,0	446 886,3	204 988,5
Soltustik Kazakhstan	2 231 681,9	449,1	4 062,9	179 788,9	1 053 509,0	993 872,0
Turkistan	7 417,6	-	-	1 186,4	3 484,6	2 746,6
Ulytau	14 134,9	-	-	74,8	9 001,3	5 058,8
Shygys Kazakhstan	101 414,3	-	-	288,6	13 246,5	87 879,2
Shymkent city	3 797,4	-	-	178,1	3 408,2	211,1

Table 5

Area sown with barley with indication of their condition

Name of the region	Sown area, ha	State of agricultural crops				
		very poor	poor	satisfactory	good	excellent
Republic of Kazakhstan	1 939 819,3	2 805,1	10 728,0	195 742,0	1 163 996,2	566 548,0
Abay	25 309,6	-	-	-	9 183,5	16 126,1
Akmola	484 903,8	1 582,4	7 257,9	41 208,4	322 926,7	111 928,4
Aktobe	68 887,4	-	-	31 216,7	34 729,6	2 941,1
Almaty	68 838,7	-	7,7	4 562,2	46 824,7	17 444,1
Batys Kazakhstan	57 579,5	-	-	13 800,5	39 275,8	4 503,2
Zhambyl	132 588,7	-	71,0	9 777,1	108 016,0	14 724,6
Zhetisu	75 364,8	-	-	1 479,0	54 917,9	18 967,9
Karagandy	135 608,1	-	-	6 774,2	75 253,4	53 580,5
Kostanay	275 428,5	388,4	461,3	43 206,0	184 108,0	47 264,8
Kyzylorda	264,0	-	-	28,4	176,9	58,7
Pavlodar	145 453,7	-	-	8 223,1	93 365,8	43 864,8
Soltustik Kazakhstan	391 098,5	87,7	1 304,1	24 299,7	166 534,1	198 872,9
Turkistan	40 340,4	697,2	1 626,0	11 002,3	21 476,0	5 538,9
Ulytau	3 693,0	49,4	-	164,4	3 479,2	-
Shygys Kazakhstan	34 460,6	-	-	-	3 728,6	30 732,0

Table 6

Area sown with oats with indication of their condition

Name of the region	Sown area, ha	State of agricultural crops				
		very poor	poor	satisfactory	good	excellent
Republic of Kazakhstan	182 326,0	-	400,3	14 655,2	116 422,7	50 847,8
Abay	1 886,7	-	-	-	1 348,5	538,2
Akmola	44 337,9	-	400,3	4 445,1	30 936,3	8 556,2
Aktobe	525,5	-	-	422,5	103,0	-
Almaty	542,0	-	-	17,5	459,6	64,9
Batys Kazakhstan	1 500,2	-	-	265,5	1 027,5	207,2
Zhetisu	614,7	-	-	-	411,8	202,9
Karagandy	13 861,5	-	-	809,5	9 047,7	4 004,3
Kostanay	40 382,4	-	-	2 615,1	30 165,0	7 602,3
Kyzylorda	4,6	-	-	-	4,6	-
Pavlodar	36 900,2	-	-	4 468,3	24 608,0	7 823,9
Soltustik Kazakhstan	36 855,6	-	-	1 592,3	16 957,4	18 305,9
Shygys Kazakhstan	4 914,7	-	-	19,4	1 353,3	3 542,0

Table 7

Rice sown area with indication of their condition

Name of the region	Sown area, ha	Состояние сельскохозяйственной культуры				
		very poor	poor	satisfactory	good	excellent
Republic of Kazakhstan	63 599,6	383,8	307,7	10 471,5	36 389,4	16 047,2
Almaty	5 926,5	7,3	2,5	1 099,3	2 904,1	1 913,3
Jetisu	695,1	-	-	9,4	600,4	85,3
Kyzylorda	54 398,7	78,2	98,0	8 957,8	31 851,8	13 412,9
Turkistan	2 579,3	298,3	207,2	405,0	1 033,1	635,7

Table 8

Forecast value of grain crops yield *

c/ha

Name of the region	All categories of households	Including		
		agricultural enterprises	individual entrepreneurs and peasant or private farms	households of the population
Republic of Kazakhstan	16,7	16,1	16,6	-
Abay	18,9	20,5	18,7	-
Akmola	15,2	15,3	14,9	-
Aktobe	13,5	13,6	13,3	-
Almaty	16,5	15,5	17,1	-
Batys Kazakhstan	15,4	15,8	15,2	-
Zhambyl	17,1	17,1	17,1	-
Zhetisu	17,0	16,4	17,0	-
Karagandy	17,7	17,7	17,6	-

Kostanay	16,0	16,1	15,8	-
Kyzylorda	15,3	14,8	15,4	-
Pavlodar	17,0	16,8	17,0	-
Soltustik Kazakhstan	17,0	16,9	16,9	-
Turkistan	17,0	17,1	16,9	-
Ulytau	16,7	7,2	16,9	-
Shygys Kazakhstan	19,7	20,1	19,3	-

* The survey is conducted in August during the period of active ripening of grain crops.

Table 9

Forecast value of the yield of individual grain crops *

Name of the region	c/ha				
	Wheat	Barley	Oats	Rice	
Republic of Kazakhstan	16,7	16,9	11,8		42,6
Abay	18,1	19,4	17,7		-
Akmola	15,7	15,7	15,7		-
Aktobe	12,4	13,0	7,9		-
Almaty	17,1	17,0	-		42,3
Batys Kazakhstan	16,6	17,8	15,5		-
Zhambyl	17,2	17,1	-		-
Zhetisu	16,6	16,9	20,7		42,6
Karagandy	17,3	17,9	18,1		-
Kostanay	14,8	15,8	16,5		-
Kyzylorda	16,1	16,1	13,7		42,2
Pavlodar	17,6	16,8	16,1		-
Soltustik Kazakhstan	17,0	16,9	17,1		-
Turkistan	17,6	16,5	-		43,2
Ulytau	18,4	18,8	-		-
Shygys Kazakhstan	17,9	18,0	18,5		-

* The survey is conducted in August during the period of active ripening of grain crops.

Responsible for the release: Department of Agricultural Statistics and National Censuses	Director of the Department: A.Jartybayeva Tel :+7 7172749162	Executor: G.Kurmanbayeva Tel: +7 7172 749283 E-mail: gu.kurmanbaeva@aspire.gov.kz	Address: 010000, Astana city Mangilik el avenue, 8 House of Ministries, Entrance 4
---	--	---	--

©The Agency for Strategic planning and reforms of the Republic of Kazakhstan of the Bureau of National statistics