

27.04.2023

# Preliminary assessment of overwintering of crops<sup>1</sup> in 2023

 **0.6%**

increase in the sown area of winter cereals compared to the 2022 sown area

**The field survey shows that winter crops overwintered well this year, with virtually no losses. The course of agrometeorological conditions during the winter was generally favorable for overwintering plants. The recorded drops in air temperature in the first and second decades of December (locally below -17°C at ground level) did not threaten the winter crops.**

In most voivodeships, there were no or little losses in the area of sown winter crops. Minor damage to winter crops was mainly due to stagnant water in the fields, snow mold and damage done by wild forest animals.

In the beginning of March the start of vegetation was observed of winter crops and permanent grassland. The rainfall recorded in the first quarter of 2023 contributed to good, and in places even excessive, moistening of the topsoil. Excessive soil moisture made spring field work difficult or impossible and caused delays in the start of spring cereal sowing. Cold days and night frosts in March and the first half of April inhibited the emergence of spring cereals and slowed the growth of winter cereals, rapeseed and permanent grassland down.

A final assessment of winter losses, as well as spring losses, and an assessment of the state of sowing of agricultural and horticultural crops will be carried out in the second half of May this year.

## Assessment of the condition of winter crops sown in the fall of 2022, for harvest in 2023

An assessment carried out in November by Statistics Poland field appraisers shows that about 4.5 million hectares of winter crops were sown for the 2023 harvest, slightly more than last year, of which:

- winter wheat was sown over 2.3 million hectares,
- rye more than 0.7 million hectares,
- winter triticale about 1.2 million hectares,
- winter barley about 0.3 million hectares,
- winter cereal mixtures about 0.1 million hectares.

The area sown to winter rape and turnip rape is estimated at about 1.0 million hectares.

Excessive soil moisture during spring in many areas of the country caused delays in the start of sowing spring cereals

The area of winter cereals sown in the fall of 2022 for the 2023 harvest was about 4.5 million hectares

<sup>1</sup> The information contains the results of a preliminary assessment of overwintering of winter crops and orchard plants carried out by Statistics Poland provincial appraisers. The assessment of overwintering of winter crops and orchard plants was made on the basis of a monolithic survey conducted in mid-March and an inspection of fields, meadows and orchards conducted at the end of March, as well as observations of agrometeorological conditions and their impact on the condition of agricultural and horticultural crops.

The condition of winter cereal sowings, i.e. wheat, rye, barley and triticale, was assessed at the level of last year, while sowings of cereal mixtures were assessed at a level slightly higher than last year assessment. Plantations of winter rape and turnip rape, on average in the country, were assessed at 3.9 qualification degrees, i.e. at the level of last year.

About 79% of the area of winter wheat, about 88% of the area of rye, more than 82% of the area of winter barley, about 88% of the area of winter triticale, about 86% of the area of winter cereal mixtures and nearly 86% of the area of winter rape and turnip rape were planted at optimal agrotechnical dates.

**Table 1. Assessment of the status of winter crops in November 2022**

Specification	2015	2016	2017	2018	2019	2020	2021	2022
	in qualifying grades <sup>a)</sup>							
Wheat	3.5	3.5	3.6	3.7	3.9	3.8	3.8	<b>3.8</b>
Rye	3.4	3.6	3.6	3.7	3.6	3.9	3.8	<b>3.8</b>
Barley	3.5	3.7	3.6	3.7	3.8	3.9	3.8	<b>3.8</b>
Triticale	3.5	3.6	3.6	3.6	3.7	3.9	3.9	<b>3.9</b>
Cereal mixtures	3.4	3.5	3.6	3.6	3.5	3.8	3.7	<b>3.8</b>
Rape and turnip rape	3.5	3.7	3.8	3.8	3.9	4.0	3.9	<b>3.9</b>

a) A grade of „5“ indicates very good condition, „4“– good, „3“– sufficient, „2“ – poor, „1“– bad, disaster.

### The course of agrometeorological conditions during the winter of 2022/2023

Air and soil temperatures in November supported vegetation and created good conditions for the emergence, growth and development of late-sown winter crops. It also enabled autumn field work and harvesting of root and fodder crops. Winter crops sown at optimum agrotechnical dates in November were tillering. Daily fluctuations in air temperature favored hardening of plants.

Significant drops in air temperature near the ground surface recorded mainly in the first and second decades of December, reaching as low as -17°C and locally, did not cause excessive cooling of the soil at the depth of the tillering node, thanks to the lingering snow cover. In the third decade of December, as a result of warming (in places the air temperature rose to as much as 18°C). melting snow combined with rainfall caused the formation of water ponds in the fields in places. The air temperature, which remained high for this time of year in January and February, caused disturbances in the winter dormancy of plants, while melting snow and rain and rain with snow ensured good soil moisture. As a result of diurnal fluctuations in air temperature, there were repeated processes of freezing and thawing of the topsoil, which could cause weakening of the root system of plants. The course of weather in March was varied. In the beginning of the month the start of vegetation of winter crops and permanent grassland was observed. Cool days with frosts recorded during the month were not conducive to intensive plant growth. Rainfall occurring in March contributed to good, and in places even excessive, moisture in the topsoil. Excessive soil moisture made spring field work difficult or impossible. Locally, at the end of the month, sowing of oats, spring wheat and spring barley began in evenly moistened fields.

In April, the country's agro-meteorological conditions were varied, with rainfall providing good soil moisture and fully securing the water needs of plants.

The course of weather conditions during the winter was generally favorable for overwintering plants

**Table 2. Air temperature and precipitation from autumn 2022 to spring 2023**

Specification	National average air temperature		National average rainfall totals	
	°C	deviation from the norm <sup>a)</sup>	mm	% norm <sup>a)</sup>
<b>AUTUMN <sup>b)</sup> 2022</b>				
September	12.4	-1.4	69.3	117.6
October	11.2	2.5	26.6	57.1
November	4.3	0.3	19.7	51.5
<b>WINTER <sup>b)</sup> 2022/2023</b>				
December	0.5	0.4	45.3	123.9
January	2.9	4.1	51.7	146.2
February	1.5	1.7	40.7	129.0
<b>SPRING <sup>b)</sup> 2023</b>				
March	4.6	1.5	38.9	103.1

a) From 2021 IMiGW adopts as the average norm from years 1991-2020.

b) Monthly averages /CUS calculations based on IMiGW data/.

### **Preliminary assessment of overwintering of winter cereals and rape and turnip rape**

Monolithic and field surveys conducted by voivodeships appraisers in late February and the first half of March this year show that winter crops across the country overwintered similarly to last year, with virtually no losses, and their condition assessed in early spring was good.

Locally, winter losses (plant damage) were reported in the following voivodeships due to:

- temperature fluctuations in the zachodniopomorskie voivodeship;
- drying winds in the mazowieckie voivodeship;
- snow muld in the mazowieckie and warmińsko-mazurskie voivodeships;
- occurrence of stagnant water in terrain depressions causing plants to get we in the pomorskie and warmińsko-mazurskie voivodeships;
- occurrence of ice cover in the mazowieckie voivodeship;
- other causes (e.g. forest animals) in the lubuskie, warmińsko-mazurskie and zachodniopomorskie voivodeships.

According to an assessment by voivodeships appraisers of the Statistics Poland, only about 0.1% of the area sown of winter cereals and about 0.1% of the area of winter rape and turnip rape were qualified for plowing in the country.

In the surveyed monolithic and field samples, the proportion of live plants and germinating seeds was for the current year:

- winter wheat – nearly 91%;
- rye – nearly to 95%;

Only about 1.1 thousand hectares of winter cereal acreage and about 1.1 thousand hectares of rapeseed and canola sown in autumn 2022 were qualified for plowing

- winter barley – about 92%;
- winter triticale – 97%;
- winter rape and turnip rape – more than 93%.

Moreover between 2% and 7% of doubtful plants were found in the surveyed monolithic samples. The highest number of doubtful plants was recorded in winter wheat plantations, and the lowest in winter triticale plantations.

### **Evaluation of wintering of trees, fruit bushes and berry plantations and the condition of horticultural crops**

The mild winter in the 2022/23 season, likewise in previous year, facilitated fruit plants to persist in good condition. The gradual decrease in air temperature at the end of 2022 created favorable conditions for entering the winter dormancy. Rainfall, sleet and snowfall occurring from October to February had a positive impact on the level of groundwater resources. Relatively high air temperatures during this period and only sporadic short-term frosts did not cause frost losses. Favorable weather conditions in January and February in many regions of the country contributed to the plants stimulation. Deterioration of weather conditions in March and early April slowed down their development, but at the same time allowed to protect flower buds from freezing in the following weeks. A factor positively influencing trees and shrubs condition at that time was the numerous rainfall recorded in many regions of the country. On the other hand, these conditions were unfavorable to carrying out protective treatments against fungal diseases.

Despite the lack of snow cover, no losses or frost damage were recorded on fruit bushes plantations. However, their development was slightly slowed down by low air temperatures in March and early April. Damage caused by frost was also not found on strawberry plantations. However, due to low air temperatures, the development of these plants at the beginning of the growing season was limited. Strawberries grown under foil also develop slightly slower.

Low air temperatures, locally falling below zero in the night, and significant soil moisture in late March and early April made it impossible to carry out field works on time in many regions of the country, contributing to the delay in sowing ground vegetables. Where sowing has started (of such species as: carrots, peas, onions, parsley and radishes), its advancement is usually lower than in previous years. As a consequence, plant emergence is weak, and in some regions of the country it has not yet occurred. Due to unfavorable thermal conditions, vegetables produced from seedlings have not been planted the ground yet. Thanks to the rich water resources in the soil, the expected increase in air temperature will significantly accelerate plant vegetation.

When quoting data from the Statistics Poland please include the information: "Source of CSO data". and in case of publishing calculations made on data published by the CSO. please include the information: "Own compilation based on CSO data".


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[Production of agricultural and horticultural crops in 2021](#)

**Data available in databases**

[BDL: Sown area](#)

**Terms used in official statistics**

[Crop area](#)