Preliminary assessment of overwintering of crops[1] in 2024

30.04.2024

⇩ 0.6%

decrease in the sown area of winter cereals compared to the 2023 sown area

The field survey shows that winter crops overwintered similarly to last year, with virtually no losses. The course of agrometeorological conditions during the winter was generally favorable for overwintering plants, and the decreases in air temperature recorded in December and January (locally below -20°C and below) 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, drying winds and damage done by forest animals.

In the second half of February, the start of vegetation of winter crops and permanent grassland was observed throughout the country. This year, vegetation is clearly accelerated compared to last year. In a large part of the country, especially on higher-lying land and on lighter soils, the first spring field work began as early as the beginning of March, and in some places also the sowing of oats, spring wheat and spring barley. Warm and sunny weather in late March and early April favorably influenced the life processes of plants, and the beginning of flowering of fruit trees and bushes was observed in many areas of Poland. Agrometeorological conditions varied across the country in April, with rainfall providing good soil moisture and securing the water needs of plants. Frosts occurring in the second half of April damaged flowers on fruit trees in some areas of the country.

In the second half of February, the start of vegetation of winter crops and permanent grassland was observed throughout the country

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 2023, for harvest in 2024

An assessment carried out in November by Statistics Poland field appraisers shows that winter cereals for the 2024 harvest have been sown about 4.5 million hectares, 0.6% less than last year, of which:

The area of winter cereals sown in the fall of 2023 for the 2024 harvest was about 4.5 million hectares

- winter wheat was sown over 2.3 million hectares,
- rye more than 0.7 million hectares,
- winter triticale more than 1.1 million hectares,
- winter barley more than 0.3 million hectares,
- winter cereal mixtures about 0.1 million hectares.

[1] 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 was made on the basis of a monolithic survey conducted in mid-March, as well as an inspection of fields, meadows and orchards conducted at the end of March, and observations of agrometeorological conditions and their impact on the condition of agricultural and horticultural crops.

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

About 85% of the area of winter wheat, more than 92% of the area of rye, about 92% of the area of winter barley, nearly 93% of the area of winter triticale, about 90% of the area of winter cereal mixtures and nearly 93% of the area of winter rape and turnip rape were planted at optimal agrotechnical dates.

The condition of winter cereal sowings, i.e. wheat, rye, barley, triticale and cereal mixtures were assessed at a level slightly higher or higher than last year assessment (Table 1.). Plantations of winter rape and turnip rape, on average in the country, were assessed at 4.0 qualification degrees, i.e. a level slightly higher than last year.

Table 1. Assessment of the status of winter crops in November 2023

Specification	2016	2017	2018	2019	2020	2021	2022	**2023**
	in qualifying grades [a)]							
Wheat	3.5	3.6	3.7	3.9	3.8	3.8	3.8	**3.9**
Rye	3.6	3.6	3.7	3.6	3.9	3.8	3.8	**4.0**
Barley	3.7	3.6	3.7	3.8	3.9	3.8	3.8	**4.0**
Triticale	3.6	3.6	3.6	3.7	3.9	3.9	3.9	**4.0**
Cereal mixtures	3.5	3.6	3.6	3.5	3.8	3.7	3.8	**3.9**
Rape and turnip rape	3.7	3.8	3.8	3.9	4.0	3.9	3.9	**4.0**

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 2023/2024

The high air and soil temperatures that persisted until the end of the second decade of 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. The significant cooling and snowfall occurring in the third decade of the month contributed to the slowdown of plant life processes.

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

Significant drops in air temperature near the ground level recorded mainly in the first half of December, reaching as low as -15°C and below, despite the lack of snow cover or its low height, did not cause excessive cooling of the soil at the depth of the tillering node, but did inhibit the life processes of plants. In the second half of the month, as a result of warming (in places the air temperature rose up to 13°C), melting snow combined with rainfall resulted in ponding of water in the fields in some places. 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 high air temperature persisting in early January caused disturbances in the winter dormancy of plants. The drops in air temperature recorded at the end of the first and second decade of the month (in places as low as minus 20°C and below) were short-lived and did not cause excessive cooling of the soil at the depth of the tillering node. At the end of the month, melting snow and rainfall caused ponding water in the fields in some places. Exceptionally high air temperatures recorded in February, significantly exceeding the long-term norm, disturbed the winter dormancy of plants.

In the second half of February, the start of the vegetation of winter plants and permanent grasslands was observed throughout the country. The rainfall that occurred during the month contributed to excessive moisture of the top layer of soil. The weather in March was favorable for the growth and development of crops. The generally favorable agro-meteorological conditions recorded during the month enabled spring field work to be carried out. Locally, in the first decade (in evenly moist fields), and in a large area of the country in the second decade of the month, sowing of oats, spring wheat and spring barley began. Moistening the top layer of soil at the beginning of the growing season fully met the water needs of the plants.

In April, the country's agrometeorological conditions were varied, with rainfall providing good soil moisture and fully securing the water needs of plants. Frosts occurring in the second half of April damaged flowers on fruit trees in some areas of the country.

Table 2. Air temperature and precipitation from autumn 2023 to spring 2024

Specification	National average air temperature		National average rainfall totals	
	°C	deviation from the norm [a]	mm	% norm [a]
AUTUMN [b] 2023				
September	17.7	3.9	22.4	39.0
October	10.9	2.1	75.5	162.0
November	4.2	0.1	70.4	177.0
WINTER [b] 2023/2024				
December	2.0	1.8	59.7	153.0
January	-0.3	0.9	50.8	139.0
February	5.7	5.8	65.2	206.0
SPRING [b] 2024				
March	6.7	3.6	28.4	75.1

a) From 2021 IMiGW adopts as the average norm from years 1991-2020.
b) Monthly averages /Statistics Poland 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:

- occurrence of stagnant water in terrain depressions causing plants to get wet in the kujawsko-pomorskie, lubuskie, łódzkie, małopolskie, pomorskie, warmińsko-mazurskie and zachodniopomorskie voivodeships;
- drying winds in the podkarpackie voivodeship;
- other causes (e.g. forest animals) in the lubelskie, lubuskie and warmińsko-mazurskie 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:

Only about 2.7 thousand hectares of winter cereal acreage and about 0.6 thousand hectares of rape and turnip rape sown in autumn 2023 were qualified for plowing

- winter wheat – nearly 94%;
- rye – nearly to 95%;
- winter barley – about 91%;
- winter triticale – about 97%;
- winter rape and turnip rape – more than 93%.

Moreover between 1% and 6% of doubtful plants (in which the degree of overwintering and final condition could not be determined) were found in the surveyed monolithic samples. The highest number of doubtful plants was recorded in winter wheat plantations, and the least 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 2023/24 season, as in several previous years, was conducive to maintaining the good condition of fruit plants. Rainfall occurring from autumn 2023 to the end of March 2024 gradually replenished groundwater resources. Slight drops in air temperature during winter did not cause frost damage to fruit trees. Favorable weather conditions at the beginning of the year stimulated fruit plants and accelerated the vegetation period from 2 to over 3 weeks compared to the long-term average. The beginning of tree blooming in many parts of the country was recorded at the turn of March and April. Rich rainfall at the beginning of April and a simultaneous increase in air temperature caused the need to carry out treatments to counteract fungal, viral diseases and pests. The plants with the greatest blooming intensity were those on plantations where fruiting had decreased in the previous year. At the current stage of production, the greatest threat to tree crops may be frosts, which usually occur until first half of May.

The condition of fruit bushes and berry plantations after the winter of 2023/24 was generally good. No significant frost damage was recorded, and the beginning of vegetation of most plants occurred 2-3 weeks earlier than usual. The acceleration of development is particularly visible on blackcurrant and colored currant plantations. However, raspberry bushes are in worse condition. Because of the poor economic results of production in 2023, growers limited protective and agrotechnical measures on many plantations. Frost losses did not occur in field strawberry cultivation, however, due to periodic temperature drops at the ground, the development of plants is less advanced in comparison to other fruit species. Additionally, high soil moisture favors the infection of strawberries by pathogens, especially fungal diseases.

The advancement of field work and sowing of field vegetables at the end of March and the beginning of April 2024 varied. There were slight delays compared to the long-term average, especially in the north-eastern and south-eastern parts of the country. They were caused

primarily by excessive soil moisture, with local water stagnation, but also by low air temperatures and slow heating of the ground. More favorable conditions were recorded in central and western Poland. In these regions, agrotechnical works were carried out within the recommended dates, and vegetable sowing (mainly carrots, parsley and onions) is more advanced compared to last year. Vegetable emergence has already started in many parts of the country, but the relatively high air temperatures and high soil moisture recorded in March resulted in increased pressure from fungal diseases and pests. For fear of frost losses, many producers decided to produce vegetables from seedlings, which are planted into the ground at a later date.

Prepared by:
Agriculture and Environment Department

Director Marta Wojciechowska
Phone: (+48 22) 608 34 62

Issued by:

Press Office

Mobile +48 695 255 032

Phone +48 22 608 38 04, +48 22 449 41 45, +48 22 608 30 09

e-mail: obslugaprasowa@stat.gov.pl

www.stat.gov.pl/en/

@StatPoland

@GlownyUrzadStatystyczny

gus_stat

glownyurzadstatystycznygus

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elated information

Land use and sown area in 2019

Production of agricultural and horticultural crops in 2022

Data available in databases

BDL: Sown area

Terms used inn official statistics

BDL: Sown area