SAALEMÜHLE+DRESDENER MÜHLE

Kontrollierte Qualität.

ÄHREN WORT

Harvest report 2025

Information by application technology

A Company of

Bindewald Gutting MILLING GROUP

BAVARIA MÜHLE DORFNER AKTIENMÜHLE

BINDEWALD SEIT 1871

CERES

CORNEXO

PLANGE

RETTENMEIER MÜHLE

RHEINTAL MÜHLEN

biomill by VogtlandBioMühlen

The harvest 2025 and its conditions

It's done – the Ährenwort farmers have successfully brought in the harvest from the growing regions that supply our two mills! The season proved challenging due to highly changeable and very wet conditions from mid-July onwards. Spelt and durum wheat, in particular, are sensitive to such weather patterns, so we had to operate our grain dryers at full capacity to safeguard quality. Based on the first evaluations, yields are good overall, with excellent and well-differentiated quality levels.

Working closely with the State Office for Environment, Agriculture and Geology, we can summarize the growing season as follows: After a very hot and dry August 2024, the weather shifted from mid-September onwards. Heavy rainfall combined with cool temperatures delayed sowing, although most fields could still be planted on schedule by the end of October. The cool autumn slowed crop emergence, but the stands developed evenly. By the onset of winter dormancy, the fields were sufficiently tillered without being overly dense.

The winter of 2024/25 was again mild, with average temperatures two to four degrees Celsius above the long-term mean. However, it was also dry, with significant precipitation deficits of around thirty to thirty-five percent. The following spring continued to be markedly dry. Until early May, the weather remained unusually warm before night frosts with temperatures below zero degrees occurred. These conditions, combined with limited rainfall, slowed the development of the crops. Signs of drought stress became visible, while at the same time disease pressure increased.

Only with the onset of showery weather in early June did the situation improve, and the stands quickly recovered, presenting a much healthier picture. From late June onwards, prolonged heat with temperatures above thirty degrees and intense solar radiation accelerated ripening and continued until mid-July. What would have been the natural start of harvest in the third week of July was then disrupted by increasingly unsettled weather. Frequent rainfall caused repeated interruptions and made harvesting considerably more difficult. From the second week of August, however, harvesting was able to resume and was successfully completed by the end of the month.

Across all cereal types we mill, the harvest has once again delivered a broad spectrum of qualities, enabling the production of well-balanced flour blends suitable for baking. The higher protein and gluten levels observed this year are partly explained by the weather. The young plants were forced to develop deeper root systems in order to access sufficient nutrients, thereby reaching soil layers with richer nitrogen reserves. In addition, our variety recommendations in recent years have increasingly focused on nitrogen-efficient strains, which are now making their own contribution to high baking quality.

Falling numbers are slightly lower compared to last year's crop, but the doughs are lively and support aromatic baked goods with strong oven spring. Through targeted raw material selection, careful segregation during storage, and optimized grain formulations – complemented by our intensive baking trials – we will adjust our wheat, rye, and spelt flours to a consistently high and reliable baking standard – that's our ÄHRENWORT promise.

As always, our application technology team is at your disposal for expert advice and hands-on support.

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Advice on processing our flours

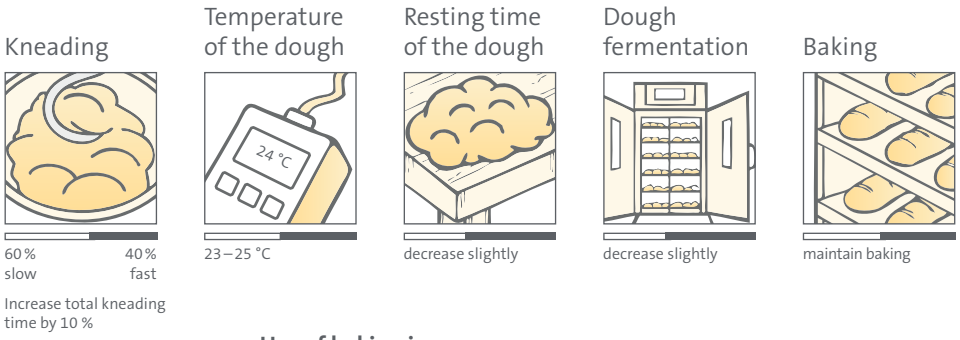
Wheat flours

Comparison of the key figures for wheat flour

Key figures	Harvest 2024	Harvest 2025
Falling numbers in secs	280–350	260–330
Protein in %	10,3–11,5	11,0–12,4
Wet gluten in %	24,5–28,0	26,0–29,5
Gluten characteristics	elastic – well strechable	elastic – well strechable

Scheme of production technology

Harvest 2025



Dough yields

Our wheat flours show comparable water absorption and deliver firm, well-structured doughs.

Mixing intensity

We recommend increasing the overall mixing time by around 10%. Our baking trials once again confirm the following ratio for optimum dough development: 60% blending phase and 40% kneading phase. Our technical advisors will be pleased to support you in adjusting the optimal settings for your mixers.

Dough temperatures

The ideal dough temperature should be set at 23–25 °C for direct processing and 22–24 °C for controlled fermentation. Carefully regulated dough temperature is a key factor in dough development and therefore has a decisive impact on final product quality.

Resting times

Dough resting times should be reviewed and, if necessary, slightly shortened. For directly processed rolls, resting times of 15–20 minutes have proven effective. For long fermentation methods, roll doughs should be given a short relaxation phase of around 5–8 minutes.

Fat and pre-dough additions

Both fat and pre-doughs can be used without concern. We recommend adding 0.5–1.0% fat (e.g. oil), which improves dough elasticity. The amount of flour used in pre-doughs should be slightly reduced, with up to 20% being suitable. Acidified pre-doughs are particularly effective for producing aromatic wheat baked goods with improved crumb structure.

Use of baking improvers

Please review the baking improvers used in your production. For direct methods, we recommend malt-based CL improvers and/or malt extracts. The use of baking malts (including partially active malt) should be limited to around 1% in directly processed doughs. This prevents excessive breakdown of dough components and helps maintain crispness for longer. For long fermentation methods, special improvers tailored to this technology should be used. Here too, the right formulation and dosage are key.

Retarded fermentation / cold proofing

Retardation technologies open up a wide range of possibilities for producing aromatic and high-quality wheat baked goods. We encourage you to take advantage of these methods to offer your customers truly distinctive products. Our technical advisors will be glad to provide tailored flours specifically suited for retarded fermentation processes.

Our wheat flours of this year are characterized by:

- comparable water absorption to previous year
- stable dough properties
- attractive pastry volume
- very good dough sheeting behaviour

Rye flours

Comparison of the key figures for rye flour

Key figures	Harvest 2024	Harvest 2025
Falling numbers in secs	200–260	170–230
Amylogram units in AE	700–950	600–850
Gelatinisation temperature in °C	69,5–72	68,5–71

Production of sour dough

Outputs of sour dough and temperatures
Bakers who have managed their sourdough according to our recommendations last year should carefully review ripening and aroma development. If necessary, the starting temperature and the inoculation rate may need to be slightly reduced. These adjustments help ensure optimal acidification at the defined processing time. For sourdough preparation, we recommend using rye flours of type 1150 or darker.

Regular pH and acidity checks should be carried out! Your specialist for application technology will be pleased to help you.

For sourdoughs prepared with meal, we recommend using coarser granulations.

Dough production

The use of flour type 1150 is recommended.
The use of rye flour type 1150 is again recommended this year. Darker rye flours such as T1150 can be processed without concern. Lighter rye flours, such as T997, provide higher dough stability and larger loaf volumes; however, their aroma profile is less pronounced and their keeping quality is somewhat lower compared to T1150.

Dough yields
The yields of doughs made predominantly from rye flour should, if necessary, be adjusted slightly downward compared to last year. While water absorption remains at a high level, it is somewhat lower than in the previous harvest.

Mixing intensity
The kneading times established last year should be maintained. Adequate kneading of rye doughs at a slow speed promotes maximum loaf volume.

Dough temperatures and resting times
The optimal dough temperature for rye-mixed breads is 25–26 °C. Adequate but not excessive resting periods promote flour swelling while preventing sticky dough surfaces.

Degree of acidification
The proportion of flour to be acidified does not require adjustment.

Use of reprocessed bread
Please review the share of reprocessed bread currently used. If loaves become more difficult to slice or the crumb appears overly moist, we recommend reducing this proportion. A carefully defined level of reprocessed bread contributes to flavor complexity, but it also affects fermentation stability and loaf volume.

Baking temperatures
Baking temperatures should be maintained at current settings.

Use of improvers
We continue to recommend the use of stabilizing baking improvers and the addition of malt extracts. Swelling flours can also be applied without concern to improve freshness. However, the dosage should be monitored carefully, as excessive use may lead to loaves with moist, difficult-to-slice crumb.

If quality issues such as crust tearing or water streaks occur, we recommend the following measures:

- Use firmer doughs
- Adjust resting and proofing times
- Review the initial baking temperature
- Use medium to coarse granulations of rye meal

Our rye flours this year are characterized by:

- comparably good acidification of the sourdoughs
- good crust formation and browning
- good, attractive baked volume
- good freshness characteristics
- aromatic baked goods

Spelt flours

Comparison of the key figures for spelt flour

Key figures	Harvest 2024	Harvest 2025
Falling numbers in secs	270 – 360	250 – 340
Protein in %	12,0 – 13,0	14,0 – 17,0
Wet gluten in %	31,0 – 35,0	33,0 – 37,0
elastic – well strechable	elastic – well strechable	elastisch – sehr gut dehnbar

Our spelt comes from controlled Ährenwort grain cultivation. This year as well, we can guarantee that our spelt is sourced 100% from controlled Ährenwort cultivation. Combined with our baking analyses, this ensures a sustainably and regionally produced spelt flour with excellent baking properties.

If you need support with recipe development or want to optimize existing products, do not hesitate to contact our application technology team.

Maintaining dough yields
Our spelt flours show comparable water absorption. To ensure optimal baked product quality, water addition should be maintained at recommended levels and fully utilized to prevent dry crumb.

Kneading intensity

Spelt doughs should be kneaded longer but less intensively than classic wheat doughs. Please set the kneading time distribution to approximately 80/20. The longer, gentler kneading promotes good gluten network formation without overstressing it, allowing optimal binding of added water.

Our application specialists are happy to assist with adjusting the optimal kneading times on your mixer.

Dough temperatures
Optimal dough temperatures should be set to 24–26 °C for direct fermentation and 23–25 °C for controlled proofing. Properly managed dough temperature positively influences dough development and is a crucial factor for baked product quality.

Dough resting times
Resting times for spelt dough should be about 50 % longer than for classic wheat doughs. This ensures optimal dough maturation despite lower enzyme activity and promotes good hydration of flour components.

Key figures	Harvest 2023	Harvest 2024
Vitreousness in %	> 90 %	> 85 %
Yellow Index	26,0	25,0
Protein in %	13,0 – 15,0	13,0 – 15,0
Falling numbers in secs	260 – 370	260 – 340

Durum/Hard wheat

Comparison of the key figures

Key figures	Harvest 2024	Harvest 2025
Vitreousness in %	> 85 %	> 90 %
Yellow Index	23,0	21,0
Protein in %	13,0 – 15,0	14,0 – 17,0
Falling numbers in secs	260 – 340	260 – 340

The quality characteristics of our regionally produced durum wheat are excellent, with high vitreousness (>90 %) and color values. The low enzyme activity is also advantageous for the production of fresh dough products.

Fusarium infections were minimal, and the detection of vomitoxins (DON) in individual batches was well below the legal limits.

Sustainable Sourcing of Raw Materials: A Cornerstone of Our Company Philosophy

Measures within the BiGu RegAg concept

- **CO_2 Sequestration**
  Cultivation concepts, fertilization, biostimulants, precision farming
- **CO_2 Reduction**
  Crop rotation, cover/intercropping crops, soil cultivation, biostimulants/soil improvers, harvest residues
- **Biodiversity**
  Flowering field program, crop rotation, structural measures, animal protection

Project green ammonia

CO_2 reducion of approx. 30 %

1,000 tonnes of green fertiliser

approx. 1,200 ha cultivation area

approx. 10,000 tonnes of wheat

approx. 8,000 tonnes of wheat flour

approx. 250 million bread rolls