

EARLY VARIETY – LATE VARIETY: SPOILT FOR CHOICE

The topic of „maturity of a variety“ is always the basis for discussion when interpreting the performance of cereals. This consideration is justified from a breeder’s point of view, as different yield trends can be seen between different varieties depending on the year and growing regions. Linda Hahn, Product Manager Cereals at DSV, explains what these trends look like and what they can mean for you as a farmer.

In times of climate change, it is advisable to manage the internal cultivation risk by splitting varieties with different maturities. In recent years, we have had to contend with an increase in extremes: 2012 wintering year, 2018, 2020 and 2022 dry years, 2023 wet year. Early cereal varieties are increasingly in demand for climatic and labour-related reasons, as medium- or late-maturing varieties accelerate their ripening under drought and heat stress, which can lead to yield losses. Early maturing varieties can therefore deliver more stable yields, as they have completed their grain filling earlier. In years with a better water supply or at locations with good soil conditions and better water retention capacity, this effect is weakened. Early varieties are ideal for staggering harvests and spreading out work peaks. An early start to harvesting can lead to better utilisation of the harvesting machines. This leaves more time for straw rotting and the cultivation of cover crops.

TAB. 1: DSV GRAIN PORTFOLIO BY MATURITY GROUP

Varieties/ maturity group	early	medium	late
Wheat varieties	COMPLICE, KAROQUE	DEBIAN, ATTRIBUT, POLARKAP, EXSAL	CHAMPION
Barley varieties	FASCINATION, SENSATION	JULIA	ESPRIT, ROYCE

The harvest period for wheat can be spread out by up to 10 to 12 days by growing several varieties with different ripening times at the same location. Early-maturing varieties, such as the winter wheat COMPLICE, are outstanding perennial crops in regions with rapid ripening due to heat and drought.

Yellow barley in spring? Use a new resistant variety!

This spring, many barley fields throughout Germany showed the typical symptoms of Barley Yellow Dwarf Virus (BYDV). In most cases, dwarfed, yellowed and wilting plants can be found in the field in nests:

The typical infestation pattern with BYDV. The disease can sometimes lead to considerable yield losses or to the cancellation of the crop. Diseased plants usually have a lower grain quality and lower grain numbers per ear, as well as reduced grain sizes.

In addition to arable maintenance measures, the cultivation of BYDV-resistant varieties offers maximum yield security and potential savings on insecticides. DSV’s new variety material is promising: The



multi-row and high-yielding winter barley FASCINATION was approved by the Federal Plant Variety Office in Germany in spring 2024.



NEW VARIETY FROM DSV'S FRENCH BREEDING PROGRAMME: KAROQUE

The focus of the cereal breeding station in Terminières, France, is on early-maturing, balanced baking wheat (BPS quality, comparable to A/B quality in Germany) with genetically higher protein content.

„The early riser“ KAROQUE is a new A wheat that is exceptionally early maturing and achieves high treated and untreated grain yields. First Z-seed is available for sowing in 2024.

Sébastien Cuvelier und Dominique Mauger, DSV FR

Adapt production technology to the variety

Varieties with an early start to growth in spring, such as the winter wheats COMPLICE and KAROQUE and the winter barleys FASCINATION and SENSATION, should be fertilised with nitrogen at an early stage to ensure a sufficient nitrogen supply. The application of growth regulators should also be adapted to the variety and not planned according to the motto „when the neighbour does it“. Varieties with restrained spring development and a desire to form higher crop densities show their advantage in the utilisation of the available vegetation period. High-yielding representatives of this type are the winter wheat CHAMPION and the winter barleys ESPRIT and ROYCE. As a medium-late compensation type with above-average tillering and a long spike (high number of grains/spike), the winter wheat CHAMPION, for example, can use the high number of grains per square metre with a longer vegetation period to produce maximum yields. The record yields in England, which were achieved in a moderate climate and with

sufficient water availability, are proof of this. In the „Highest Wheat Yield“ category, farmer Tim Lamyman from Lincolnshire, a county in the East Midlands of England, achieved the world record with the variety CHAMPION. He harvested 17.95 tonnes per hectare from an 8.292-hectare area, which corresponds to a total yield of almost 150 tonnes. In Germany, the variety achieved very good yields in maritime regions. The tendency towards later development is also an advantage at initially cooler and often later trafficable locations, as the need for fertiliser and growth regulators presents later. Table 1 shows which DSV varieties can be categorised in which maturity segment.

Variety splitting reduces cultivation risk

Considering climate change, the cultivation risk of cereals is increasing considerably. The right choice of variety with a suitable variety splitting that is adapted to the individual farm rhythm is playing an increasingly important role. This should be focussed on more, as it lays the foundation for a successful harvest.

Conclusion

There is no generalised advantage to either one or the other type of variety, as it depends on the individual conditions on the farm and the annual weather. Therefore, take a look at the perennial conditions in your region. In addition, the performance potential can be optimally utilised with production technology adapted to the variety. Choose the varieties that best suit your location and your needs from DSV's diverse range.

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In addition to its cultivation safety due to its BYDV resistance, FASCINATION is characterised within the multi-row barley segment by its short straw length and good tillering capacity. In the three-year value test, it showed an average of 150 ears/m² more than the classic multi-row varieties. Due to its shorter growth, good stability and straw stability, there is little need for growth regulators. At locations with low yield potential, there is no need to apply growth regulators at all. The high crop densities are an important yield parameter that should be focussed on in the production technology of the variety.

Up to 9 days earlier ripening

Another special feature of the variety is the early start of vegetation in spring as well as the early ear emergence and medium-early maturity. In the comparison of the reference varieties (standard varieties)

in the three-year value test, FASCINATION was up to 8 days earlier in ear emergence and 9 days earlier in maturity than the „normally“ ripe varieties. This underlines the importance of an adapted fertilisation and growth regulator strategy in order to promote the relevant yield components in good time and secure the yield potential at an early stage. Initial experience also shows that a combination of the 1st and 2nd fertiliser application is an advantage at medium and lighter locations.

