Great yields start with great oilseeds

Forward thinking for better growing
www.oilseeds.bayer.com
As the sun’s warmth brings the fields to life, the vibrant splash of oilseed rape in flower is now an integral part of the spring countryside. It’s a sight that is set to continue for Europe’s farmers, with oilseed rape having an enormous future as demand is driven up by its use in food, fuel and feed. For years, worldwide demand of oilseed rape has exceeded global production and will continue to in the future unless we can improve yield further.

**Propelling the future of oilseed rape**

**Expertise, yield, quality and our commitment to the future**

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**Drive for yield: Demand exceeds supply**

![Graph showing production and demand of oilseed rape over years](chart.png)
Helping farming deliver solutions, tailored to the European farmer, now covers everything from seed, seed treatment, crop production products and services to critical agronomic advice. The result being sustainable and profitable outcomes for farmers and their families, as well as the oilseed rape industry.

Our commitment to high quality oilseed rape starts with a strong investment in breeding excellence, state-of-the-art facilities and the world’s widest oilseed rape gene pool. This is how we plan to help farmers deliver even greater oilseed rape yields in future, or to put it another way how we are ‘propelling the future of oilseed rape’.

So, there’s a real and sustained opportunity for European farmers to grow their businesses, if they can boost their oilseed rape harvest. Our team at Bayer CropScience is committed to doing just that, to ensure that farmers have the very best seed for the very best harvest. It’s a commitment that draws on our expertise from across the world, and starts with talking to farmers and understanding their needs, literally from the ground up.

Why us?
Farmers across Europe rely on Bayer CropScience for innovative crop protection products and services, that make a huge difference to how they farm, and to the yield and profitability of their crop. So we are best placed to now make a significant long-term investment in oilseed rape breeding and research specifically for the European market. More than that, we are bringing fresh thinking and expertise from our worldwide team of seed specialists.

What it means for farmers
Our goal is simply to fulfil farmers’ expectations for exceptional yield and performance by providing just the right seed. Over time, this will come from an extensive range of high quality seeds suited to the diverse agro-climatic conditions found across Europe’s oilseed rape growing areas. By listening carefully we have built up our breeding pipeline around what matters most to farmers: high yields, effective disease control and winter hardiness. Building on our in-depth understanding and global expertise in this crop, we are developing a range of high-yielding varieties with improved seed quality, an excellent germination rate and purity, giving consistently high performance. For the farmer, not just increased yields, but peace of mind too.

Higher yields – consistent harvests
Through best-in-class oilseed rape – spring and winter, hybrid and open-pollinated seed varieties with features such as winter hardiness and Imidazolinone herbicide tolerance for easier weed management – farmers can look forward to an even brighter future for their oilseed rape. We’ve lots of hard work ahead of us, but our team is as passionate and committed to the future of oilseed rape as we know you are.

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Meeting European needs
At a breeding station in North Germany, not far from the picturesque Flensburg Fjord, Jutta Kaiser heads the local Bayer CropScience breeding team. She looks back on 23 years of experience in breeding hybrid and open-pollinated varieties of winter and spring oilseed rape for the European market.

The challenge she and all our European breeding teams face is to breed best-in-class seeds that deliver the greatest possible yield, high oil content, good disease resistance (particularly against Phoma) and improved winter hardiness in both the Atlantic and the Continental Europe agro-climatic zones.

In working towards these goals, our European breeding teams are benefiting from close cooperation with experts from our global breeding network for oilseed rape.

An eye for detail
Dirk describes the steps Bayer CropScience is taking to achieve its European goals: “First, we develop and select parents that are good for characteristics like disease resistance, hardiness and quality oil. Then we evaluate the combining ability of the new line. The result is a range of hybrids from which the best candidates are selected. The parents of the good hybrids are used to make new crosses with improved combining ability for the desired characteristics. It’s a process that takes many years. These days, we are supported by intensive research and powerful computers that crunch all the trial data, but ultimately seed breeding is a work of art – the breeder’s eye and experience are vital in spotting the best breeding material.”

European trials
Whilst there’s excitement around a promising hybrid in the lab, it’s in the field trials that the real measure of success is found. Which is why Bayer CropScience is investing heavily in breeding trials across Europe’s various agro-climatic zones to develop a comprehensive portfolio of high performing hybrids. “Our long-term vision and determination for success make all the difference,” Jutta says with pride. It’s a difference that European farmers will benefit from for many years to come.

“Breeding seed is a work of art”
Building on decades of experience and extensive trials

At the beginning of the year, Dirk Decherf, our European Breeding Manager, visits his trials in Poland. In February, temperatures plunge to -27 °C. Dirk knows this is the ultimate test in selecting varieties that will survive such hard winter conditions. It’s just one of the many challenges oilseed rape farmers face across Europe, challenges that Dirk and his team are seeking to overcome through selective breeding.

“Hybrid vigour is a clear benefit to the grower”

Dirk Decherf

Unparalleled hybrid experience
“We were one of the first to breed hybrids because hybrid vigour is a clear benefit for the grower” he explains. It was through programmes like this that in 1996, Bayer CropScience introduced InVigor® hybrid seeds to Canadian canola growers (spring oilseed rape). It was a move that revolutionised the market. Ever since, InVigor hybrids have consistently delivered the highest yielding canola on the market, continually raising the bar and setting the standard by which all other canola is measured. “Now, Bayer CropScience is applying this expertise to the extremely varied European environment,” Dirk says.

“The best possible yield, high oil content, good disease resistance and improved winter hardiness”

Jutta Kaiser
Research, breeding and trait development targets
Targeting traits that matter

In October 2009, Bayer CropScience announced the first-ever sequencing of the entire genome of oilseed rape. “That milestone achievement was only the beginning,” says Bart Lambert, our Research Manager in oilseed rape.

“The advances we’ve made since the sequencing of the genome have accelerated ongoing trait research, facilitated the design and development of diagnostic tools, and significantly shortened the timelines in creating a new phenotype or trait, such as herbicide tolerance.”

Bart Lambert

“This has provided valuable information about the variation or conservation of certain genomic regions in our hybrid-breeding program. Our breeders are using this information to design and develop new, better-performing hybrids.”

Bart Lambert

Gene sequencing is a complex science that Bayer CropScience has pioneered. Researchers like Bart are working hand in hand with breeders such as Dirk and Jutta to deliver the analytical tools to develop first-class seeds for oilseed rape.

Target: Maximise grain/oil yields and create new oil profiles

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<td>- Photosynthetic efficiency</td>
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<td>- Seedpod shatter reduction</td>
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<td>2. Enhancing stress tolerance</td>
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Improving oil quality

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Bart Lambert
Delivering seed quality
What it takes to bring the best hybrids to market

The path from a very few breeder seeds to hundreds of tonnes of a commercial variety requires dedicated attention to detail at every stage in order to get the quality required. Christian Carensac, our European Seed Supply Chain Manager, has a pragmatic definition of good quality seed:

“It’s important for the farmers to use commercial seeds with the highest germination and purity, to facilitate crop establishment and uniform maturity at harvest time. In our production operations, we are focused on meeting or exceeding the legal standards of quality in order to make a real difference in the field.”

“The key to ensuring good seed quality is to achieve optimum results at every stage of seed production from sowing to harvest.” Christian Carensac
On 300 hectares of rich and heavy arable land he now grows oilseed rape, wheat and barley: “For decades, oilseed rape has had a firm place in our crop rotation system. Since it’s a Cruciferae and not a cereal, it makes an ideal rotation crop before wheat.” Volker has been protecting his oilseed rape crop with Bayer CropScience products for years and now has high expectations of the company’s seed offering: “Their crop protection reputation has naturally raised the bar very high. I know Bayer CropScience as an innovative company and expect their research efforts to bring new advances in breeding – particularly in the fast-growing hybrid varieties I need for my heavy soil.”

Stéphane Pouzadoux, our European Seed Development Manager, is focused on ensuring that locally adapted varieties are available to farmers such as Volker. “Our seed portfolio offers four main benefits: high and consistent yields, geographical adaptability, hybrid vigor and easy crop management. First, the use of state-of-the-art breeding methods have resulted in the development of high-performance winter and spring varieties to match the needs of Europe’s very diverse agro-climatic environments and different agricultural practices stretching from Spain to Kazakhstan. Secondly, we are committed to developing new high-yielding hybrids that require less inputs to deliver a higher oil yield per hectare and a better return on investment for farmers. Thirdly, we try to develop hybrids and open-pollinated varieties that cope better with stress conditions thanks to vigorous early growth, robust plants and good root development. Last but not least, we aim at delivering high quality seeds that enable easy crop management for farmers through rapid crop establishment, uniformity, even opening, reduced shattering and fewer yield losses.”

Michael Chmielewski drives Bayer CropScience’s global oilseed rape strategy: “We have built our reputation in oilseed rape in Europe especially through seed treatment applications, as well as our insecticide and fungicide offering.”

“Over the years, we have established close personal contacts with oilseed rape growers and gained a deep understanding of the local challenges to help ensure the best results in the cropping season. Around the world we are establishing long-term partnerships with the food chain such as the oil crushing industry. We are also investing heavily in Europe to establish a top-quality seed offering, because we know that great yields start with great oilseeds.”
Our offer starts with the seed
The Bayer CropScience portfolio

We have an extensive range of more than 50 oilseed rape varieties that are available in Europe. Within this large choice you will find the right variety that will best suit your agro-climatic region as we are present in more than 20 European countries.

Our top 25 oilseed rape varieties

**Spring oilseed rape**
- HYBRID: Belinda, Delight, Mirco CL*
- OPEN-POLLINATED: Heros, Highlight, Hunter, Larissa, Proximo

**Winter oilseed rape**
- HYBRID: Arkaso, Bagira, Belana, Brentano, Finesse, Jennifer, Jumper, Merano, Vetrica, Benjamin, Herkules, Nicola, Elektra, Astrada
- OPEN-POLLINATED: Letitia, Patron, Bellevue

For more information contact your local Bayer CropScience representative to assess the most suitable varieties for your needs.

*Clearfield® Production System for Oilseed Rape

We also have a range of crop protection products made for easy growing and improving yields.

### Managing pests
- Proteus®
- Decis®
- Folicur®
- Tilmor®
- Proline®
- Prosaro®
- Propulse®
- Decis®
- Biscaya®
- Seed Pod Weevil/Pod Midge

### Controlling disease
- Phoma – Alternaria – Sclerotinia
- PGR, Cylindrosporiose
- Sclerotinia, Alternaria

### Protecting the seed
- Seed Treatment: Modesto®
- Elado®

### Vegetative growth
- Pre-flowering
- Flowering
- Harvest

NB: Please refer to the product registered in your country via your local Bayer CropScience representative. Third-party herbicides are also available in some countries.