SMART TECH INATREQ.

Inatreq™ active

TAKE A CLOSER LOOK

Your guide to the NEW wheat fungicide

Please note: This fungicide is not currently authorised - authorisation is being sought from HSE-CRD.

Corteva's Inatreq gets set for UK fungicide market.

UK farmers are set to become the first in the world to access a new fungicide for the control of Septoria in cereal crops.

Inatreq™ active has undergone decades of work by some of the brightest minds in global crop protection product development and Corteva Agriscience's UK customers are hoping to make their first applications in spring 2020.

"Bringing exciting new innovations to our farmers is what Corteva is most passionate about and it is with enormous pride that we are able to deliver Inatreq," said Mike Ashworth, Cereal Fungicide Product Manager.

With novel sites of action being increasingly hard to discover, Corteva's scientists turned to nature to discover Inatreq.

The new molecule is derived from a natural compound, UK-2A, produced through fermentation and converted to Inatreq through a single step modification after fermentation to enhance stability and offer long term protection.

Inatreq is converted back to UK-2A both inside plants and in the presence of fungi. It binds to the quinone inside inhibitor in the fungal pathogen – a different site to all other cereal fungicides on the market, giving it a unique site of action.

Curative properties tackle latent Septoria and with the bulk of applications expected at the T2 timing, farmers using Inatreq can expect robust protection lasting four to six weeks.

Outstanding control of Septoria will be noted by farmers and advisors as Inatreq's key attribute. But the list of qualities is long.

"Inatreq is arriving at a crucial time," Mike says. "Growers are losing a lot of active ingredients through regulatory withdrawals or resistance. Inatreq offers reliable disease control, even against strains resistant to other chemistry."

Key features

- **Novel target site in cereals**
- **Naturally derived, produced by fermentation**
- **Protectant and curative**
- **No cross resistance to existing chemistry**
- **Long-lasting Septoria protection**
- **Control of other key diseases including rusts**
- **UK farmers first in the world to access Inatreq in cereals**

iQ-4 formulation: Innovation designed for Inatreq.

optimised with i-Q4™ Technology

The credentials of Inatreq are unquestionable.

Such is the efficacy of the active ingredient, there is no doubt it will control the Septoria it finds in the plant and provide lasting protection.

But this performance does not happen by chance.

The challenge was laid down to Formulation Leader Neil Foster who has worked for Corteva and its heritage brands for 29 years.

> **"To see the product finally here and to tell people that we're ready, that's very exciting."**
>
> *Neil Foster, Formulation Leader, Corteva*

He explains that in its raw state Inatreq was incredibly effective at controlling disease but needed a bespoke formulation to optimise performance.

As Neil explains, a highly active ingredient is no good if it does not get to its target.

"My job was to take the molecule and turn it into something that the end user can rely on," he says. "That was my role and I am very passionate about it."

"Getting that active ingredient to the place where it needs to work; that's the key and that's what the i-Q4 formulation is doing."

The patented i-Q4 formulation was created specifically for Inatreq, allowing the product to stick to and spread across the leaf's surface, creating a protective shield and reservoir for the active to continually penetrate into the leaf, offering curative activity.

It has four fundamental characteristics that make it so effective:

RETENTION of the spray droplet on the leaf when the product is applied

Near 100% **COVERAGE** of the leaf after application

PENETRATION of the active ingredient into the plant

Rapid **UPTAKE** of active into the plant tissue

Neil says: "The product is going to come out of the sprayer, hit the leaf, and with the adjuvant system we've created it will stick to the leaf with very little run off.

"We then see a spreading of the liquid across the surface, which then penetrates into the leaf."

Watch Neil Foster explain how Corteva's i-Q4 formulation works at bit.ly/InatreqIQ4

My Inatreq experience.

Since 2017 a number of farmers across the UK have put Inatreq to the test on one-hectare blocks of wheat, comparing the new chemistry's ability to control Septoria against their standard farm programme. Here's what a handful of the Inatreq experience farmers think.

David Fuller
McGregor Farms, Coldsteam, Scottish Borders

"What we've noticed about Inatreq is primarily good disease control. The trial plot was visible throughout the growing season with a darker green foliage than the rest of the field too. At harvest time you could see it was a more golden colour which to us suggests there might be a bit of bio-stimulation as well as fungicidal control. I think Inatreq will have a place on our farm. Having a different site of action will be important for us, and it has proven to perform as well as any other fungicide we are currently using."

Toby Hogsbjerg
Farm Manager,
Kings Lynn, Norfolk

"The Inatreq performed as well as our farm standard in 2019. It's been good to see it perform as expected in the trial we have done. It's done its job, and that's what I'm looking for. The only way you learn about a product is by trying it on your own farm and in your own field. It's been interesting to learn about a product before it comes on the market. What's important is a different mode of action and something that offers long-term protection rather than fire-fight the disease once it's taken hold."

Carl Clayton
Intake Farm, Tadcaster,
North Yorkshire

"Our experience has been that the one hectare of crops treated with Inatreq have yielded the same or slightly higher than the standard farm treatment. We've got to be mindful of resistance and look after old chemistry and new chemistry to maximise the longevity of all the products we have at our disposal."

Andrew Mahon
Bromborough Estate,
Wellingborough, Northamptonshire

"My impressions of Inatreq having trialled it for three years is that it's going to be a very useful fungicide. It's certainly good, and as a disease management tool it's going to be important to have that different target site. Being able to trial it on my farm and compare it with my standard treatment has given me confidence in the product already. It controls Septoria, and that's what I was looking for. We will be using it during the next growing season."

Julian Gibbons
M Gibbons & Sons, Alresford, Hampshire

"The good news for us is that we should soon have a new product in Inatreq that's at least as good as our farm standard and has proved it in trials for three years in a row. We've been losing active ingredients for a number of years and we rely on just two active ingredients with curative effects. To now have a third which, when used in a good stewardship programme with alternative actives and modes of action, will be as robust as our existing chemistry is really important."

A new generation of cereal fungicides.

From soil sample to market launch; the 25-year journey to create Inatreq.

Good things come to those who wait, so the proverb goes.

That's certainly the case when a dedicated team of experts are set on discovering the next generation of cereal fungicides.

It has taken 25 years of research, testing, investment, emotion and determination, but Inatreq is now within touching distance for UK farmers.

"If it wasn't for a huge amount of personal commitment and endeavour from scientists, project managers and advocates, Inatreq may not have got as far as it has," says Andy Leader, Global Biology Programme Leader for Corteva's Picolinamide fungicides.

Corteva's scientists tried, failed, then tried again with what was an incredible challenge working with a natural product and fermentation, ensuring conversion from Inatreq back to UK-2A in both plants and fungi; eventually delivering a unique molecule and formulation worthy of the acclaim it is receiving.

"I can clearly remember the first field testing with UK-2A back in 1996. We could not get efficacy to translate from the glasshouse so it is an amazing feeling to see what we have created with Inatreq," Andy said.

"Not only do we have a fungicide that addresses a key discovery ambition for Corteva, but we have delivered a novel fungicide with a unique new target site in cereals for farmers, the first in nearly two decades.

"It has outstanding biology performance on Septoria and other cereal diseases with curative efficacy and strong residual protectant properties with local plant mobility. Coupled to this there is no cross resistance to all other Septoria fungicides in the cereal market."

Dow AgroSciences + DUPONT + PIONEER =

CORTEVA™ agriscience

Discover more at corteva.co.uk
Technical Hotline: 0800 689 8899 E-mail: ukhotline@corteva.com

USE PLANT PROTECTION PRODUCTS SAFELY. Always read the label and product information before use. For further information including warning phrases and symbols refer to label.

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Inatreq™ active contains fenpicoxamid.