

Winter wheat – early-season nitrogen and crop protection



In brief:

GALLANT is a high output winter wheat variety which has set a new benchmark in nabim Group 1 milling wheat

As well as top yields, it has produced consistent quality and is practical to grow – with good standing power and early maturity

Like all high output varieties, however, it responds to good management

During the early season, nitrogen inputs should be tailored to its speed of development

As with other varieties, with a new race of yellow rust now present, it will be important to factor this into fungicide decisions along with other disease from the start



Nitrogen application in GALLANT should be accurately timed according to the variety's rapid early growth

Core recommendation:

Disease control

The following programme is designed to target *Septoria tritici*, yellow & brown rust.

T0 – CHEROKEE 0.75–1.0 l/ha

T1 – CHEROKEE 1.5 l/ha + UNIX 0.5 kg/ha (against eyespot)

T2 – AMISTAR OPTI 1.25 l/ha + rust-active triazole (e.g. three quarter rate)

T3 – AMISTAR OPTI 0.75–1.0 l/ha + Fusarium-active triazole

Lodging / canopy management and pre-stress conditioning

T0 (up to GS30) – MODDUS 0.1-0.2# l/ha

T1 (GS31–32) – MODDUS 0.1-0.2# l/ha + chlormequat 1.25 l/ha

Use higher rate in higher lodging pressure situations. In low plant populations, MODDUS at GS29-30 can be used to help promote rooting and tillers.

Matching nitrogen to crop development

GALLANT has a prostrate growth habit, shows good tolerance to winter kill and is competitive against weeds. However it is not a very high-tillering variety and, once temperatures start to increase, its speed of development to GS31 can be fast. Accordingly, it is important that nitrogen is not limiting early in the season (or later) and application should be accurately timed.

First application – 40-60 kg/ha* by mid March

While many winter wheat crops will not receive a first dose of N and S until early April, GALLANT should receive this while still tillering – by mid March. The aim is to promote tillering and save existing tillers. In thin crops, some of the second dose (but not the third) may be brought forward to aid tillering. MODDUS will also aid tillering (see left).

Second application – 130-170 kg/ha* by GS32

The second N input is aimed at building an optimal canopy for yield. It is often applied as a split dose at GS31 and GS32. This is good practice because if conditions turn dry after GS32 it increases the chance of some N being taken up.

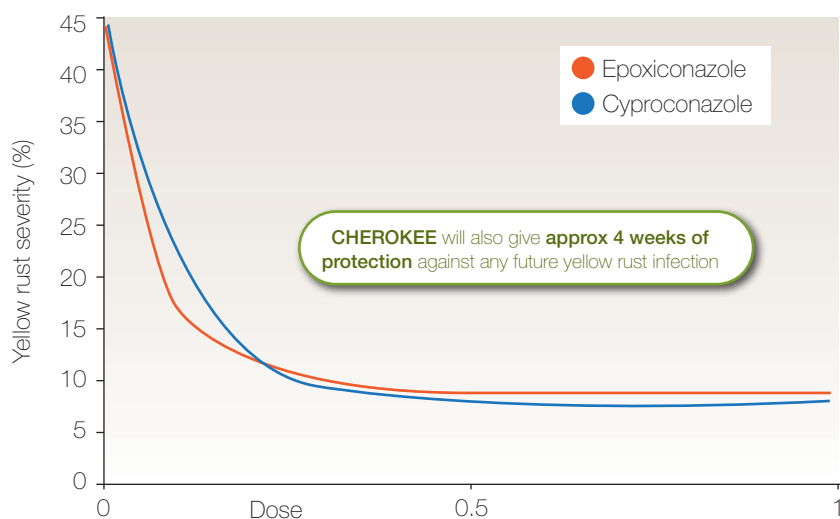
Third application – 40-60 kg/ha* at GS37-39

The aim of this is to build grain protein. With its high yield, it is important to save 40-60 kg/ha for this application. Using liquid N later on ears is not favoured by some buyers – so consult your contract if in doubt.

* These figures are for guidance only. You must work with your agronomist when calculating nitrogen rates and timings, taking into consideration end market requirements and the fertility of the field. You should also work within any Defra guidelines / restrictions.

Cyproconazole (CHEROKEE) provides unbeatable curativity on rust

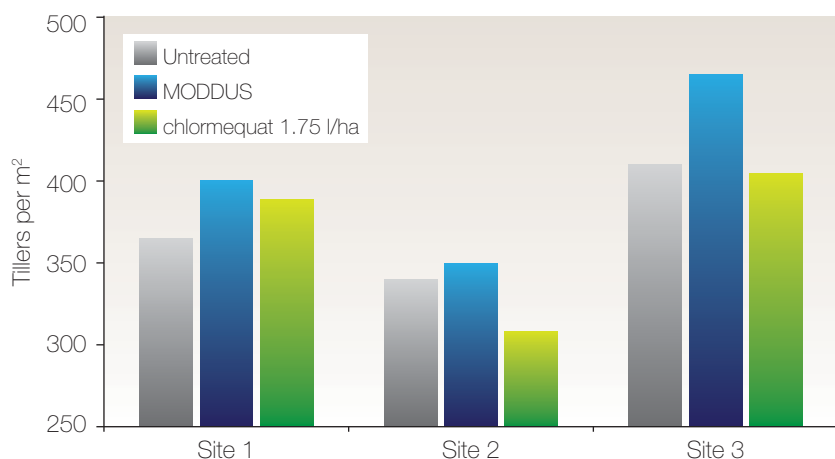
Eradicant activity



Source: HGCA dose response curves

- With the threat of yellow rust on top of *Septoria tritici* and brown rust – after the discovery of the virulent new yellow rust strain – T0 control will be crucial in many wheat crops
- That is especially the case since rusts are extremely difficult to eradicate if allowed to establish
- CHEROKEE contains two triazoles including cyproconazole for 'kick back' and up to 4 weeks protection against future yellow rust infection – plus a BRAVO element against *Septoria tritici*

MODDUS – increased tiller numbers compared to chlormequat from early-season use



Source: Syngenta field experiments
Application: GS23-30

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GALLANT at a glance

UK treated yield
(% controls, 10.6 t/ha) **100**

Speed of development to GS31
(days +/- average)

Early September sown	-3
Early October sown	-4
Early November sown	-5

Resistance to lodging

Without PGR	7
With PGR	8

Disease resistance

Mildew	6
Yellow rust	4
Brown rust	4
<i>Septoria nodrum</i>	[5]
<i>Septoria tritici</i>	5
Eyespot	6
Fusarium ear blight	[6]

Data from the HGCA Recommended Lists database.
Full data at www.hgca.com.

[] Denotes limited data

Key tips:

Monitor GALLANT crops carefully to ensure nitrogen timings and other growth stage-related input timings aren't missed

Use CHEROKEE at T0 and T1 to provide an early hit against rust and *Septoria tritici* threats

Follow with AMISTAR OPTI + triazole at T2 to maintain rust protection, and for greening and BRAVO effect against *Septoria tritici*

As with any variety, P and K should not be limiting. Consult your advisor for guidance. (With its rooting effects, MODDUS can increase uptake of P and K)

Correct any micronutrient deficiencies – e.g. around T1. In particular check magnesium and manganese levels but remember copper, which is important for pollination

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