

UNIZEB GOLD

(MAPP 18186)

May 2018

UNIZEB GOLD is a suspension concentrate containing 500g/L mancozeb for the control of various fungal diseases in cereals. For use in the reduction of *Septoria tritici* (*Mycosphaerella graminicola*) in winter and spring wheat, triticale and spelt.

UNIZEB GOLD also provides useful control of fusarium ear blight (*F. graminearum* and *F. culmorum*) and can be used as part of a T3 fungicide programme.

UNIZEB GOLD Product Profile

Active ingredient	mancozeb
Inclusion rate	500g/L
Formulation	Suspension Concentrate (SC)
Crops	Winter wheat, spring wheat, triticale, spelt
Maximum individual dose	3.0L/ha
Maximum number of treatments	3
Latest time of application	Up to and including full flowering
Pack size	10L
Aquatic buffer zone	5m
Water volume	200 – 400L/ha

UNIZEB GOLD at T3

UNIZEB GOLD contains mancozeb, a multisite protectant fungicide with contact activity and is part of the dithiocarbamate fungicide group.

According to FRAC (Fungicide Resistance Action Committee) mancozeb is 'generally considered as a low risk active with out any signs of resistance developing'.

UNIZEB GOLD can be used in cereals as a partner to azoles, strobilurins and SDHIs:

- For additional activity against fusarium ear blight (*F. graminearum* and *F. culmorum*)
- For the additional control of *septoria tritici*
- For additional activity against yellow rust and brown rust
- Use mancozeb in tank mix as part of a resistance management strategy
- UNIZEB GOLD also provides manganese, a key nutrient in several physiological processes particularly photosynthesis, and zinc, an essential constituent of many enzymes and proteins.

UNIZEB GOLD for the Control of Fusarium Ear Blight

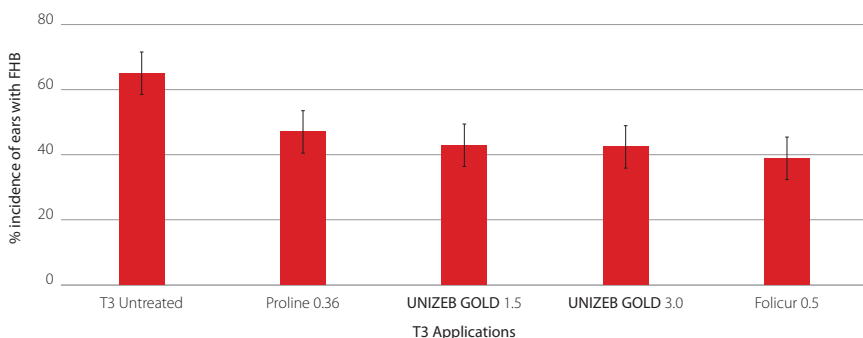
Triazoles, in particular tebuconazole and prothioconazole, are the most commonly used actives at T3 for the control of ear disease and to provide additional septoria and rust control. The reliance on the triazole group of chemistry increases the risk of resistance developing. Mancozeb belongs to the dithiocarbamate group of fungicides and is classified by the Fungicide Resistance Action Committee (FRAC) as belonging to the mode of action group M3 (Multi Site Action). There is no known resistance to mancozeb.

UNIZEB GOLD has been shown to provide activity similar to tebuconazole against fusarium.

UNIZEB GOLD Trials

The objective of recent work by UPL Europe and ADAS has been to investigate the activity of mancozeb on two key fusarium species. Results from 2016 are shown in Graph 1 for an inoculated and misted trial at ADAS Gleadthorpe, trials are continuing in 2018.

Graph 1. Fusarium Trial (inoculated and misted) – ADAS Gleadthorpe 2016



Source: ADAS

Inoculation with *F. Graminearum*, and *F. Culmorum* 1 day post fungicide application. All treatments received T0 – Cherokee 1.0L/ha, T1 Bravo 1.0L/ha + Comet 0.5L/ha, T2 Cherokee 2.0L/ha. CV Grafton (FHB = Fusarium Head Blight).

FPr	0.004
LSD @5%	13.27

Conclusions from 2016 and 2017

- Fusarium control from UNIZEB GOLD was comparable to Folicur (tebuconazole)
- UNIZEB GOLD gave improved septoria control and increased green leaf area
- UNIZEB GOLD added to the control of fusarium above that of Folicur (tebuconazole) alone (Folicur 0.5L/ha + UNIZEB GOLD 3L/ha)
- The addition of UNIZEB GOLD to Folicur (tebuconazole) improved septoria control and yield

UNIZEB GOLD – for resistance management and disease protection

UNIZEB GOLD provides protection against key cereal diseases and compares favourably to other multi-site fungicides.

Table 1. Wheat Disease Activity Ratings For Multi-Site Fungicides Approved For Use On Wheat

Chemical Group	FRAC Code	Active Ingredient	Activity Rating			
			Mildew	Septoria tritici	Yellow rust	Brown rust
Dithiocarbamates	M3	mancozeb	+	+++	+	+
Phthalimides	M4	folpet	—	++	+	+
Chloronitrile	M5	chlorothalonil	+	++++	—	—

Source: AHDB Information Sheet 56 Spring 2017: Fungicide activity and performance in wheat.

UNIZEB GOLD as a Source of Plant Nutrition.

Mancozeb contains 20% Mn (Manganese) and 2.5% Zn (Zinc), therefore it can supply useful amounts of these nutrients when applied to cereals.

Manganese is essential for foliage to produce and maintain good photosynthetic activity, zinc is essential for growth and protein production.

Table 2 compares the amount of manganese supplied from UNIZEB GOLD compared to other sources of this nutrient.

Table 2. Comparison of Products Supplying Manganese

Product	Amount of Mn in 1.0kg/L	Amount of Zn in 1.0kg/L
UNIZEB GOLD	100g	12.5g
Manganese Sulphate	270g	—
Manganese 15%	150g	—

BASIS points for the technical information provided by this update are CP/59401/1718/g (1 CPD).

To claim please e-mail: assistant@basis-reg.co.uk.

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