



CEREAL SEED TREATMENT - BENEFITS

Bayer CropScience is one of the world's leading producer of seed treatment products.

There are several benefits of seed treatment;

- Small amount of active ingredient protect seeds, seedlings and young plants all the way from the soil up to and including the early season foliar pests and diseases.
- The insecticidal and fungicidal properties of the seed treatment compound create a disinfected halo thus protecting the roots and the seedling, ensuring rapid establishment and fast nutrient uptake.

To achieve optimum biological efficacy, seed treatment has important requisites;

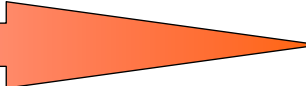
- Good quality seed
- Highly effective seed treatment products
- Appropriate application technology/equipment
- Good application methods

Why Seed Treatment?



Seed & soil disinfection	Seedling protection	Crop Protection	Crop enhancement	Bountiful harvest
Seed ➤ Disinfection Soil ➤ Creation of protective halo ➤ Soil-borne pest and disease control	Crop ➤ Protected/improved germination ➤ Enabling better and faster establishment	Savings & Convenience ➤ Early season pests and disease control ➤ Enhancing a better crop stand	Yield and quality improvement	Better return on investment
From seed to seedling	From seedling to plant	From plant stand to yield		

Bayer CropScience Seed treatment – The foundation for bountiful Harvest





January 2006

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Update

WHEAT SEED TREATMENT

Gaicho 350 FS (Imidacloprid 350g/L)

Gaicho is a broad spectrum systemic insecticidal seed treatment for control of soil-borne and foliar pests in cereal crops. Owing to its excellent root systemic and long residual properties, Gaicho controls sucking pests (vectors for viral diseases, especially aphids, plant and leaf hoppers). In soil, soil-borne insect pests such as; wireworms, frit fly and termites are effectively controlled. Gaicho creates a protected root establishment base that enables excellent crop establishment and nutrients uptake.

Bayer CropScience **Wheat** Seed Treatment

Product: Gaicho 350 FS

Rate 100-200ml/100kg Seed

Seed Treatment Protection





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BARLEY SEED TREATMENT

Raxil Super FS 375 (Imidacloprid 350g/l, Tebuconazole 15g/l, Triazoxide 10g/l)

Raxil Super FS 375 is a co-formulated product containing insecticidal and fungicidal properties.

Raxil Super FS 375 is a broad spectrum systemic seed treatment that controls soil and seed-borne diseases as well as soil-borne pests that include frit fly and termites. The fungicide component controls Smuts (*Ustilago spp*), Net-blotch (*Perenophora teres*), Root & Foot rot (*Helminthosporium sativum*). Owing to its excellent root systemic and long residual properties, Raxil Super effectively controls aphids-vectors for Barley Yellow Dwarf Virus.

Bayer CropScience Barley Seed Treatment

Product: Raxil Super FS 375

Rate: 200ml/100kg Seed

Seed Treatment Protection

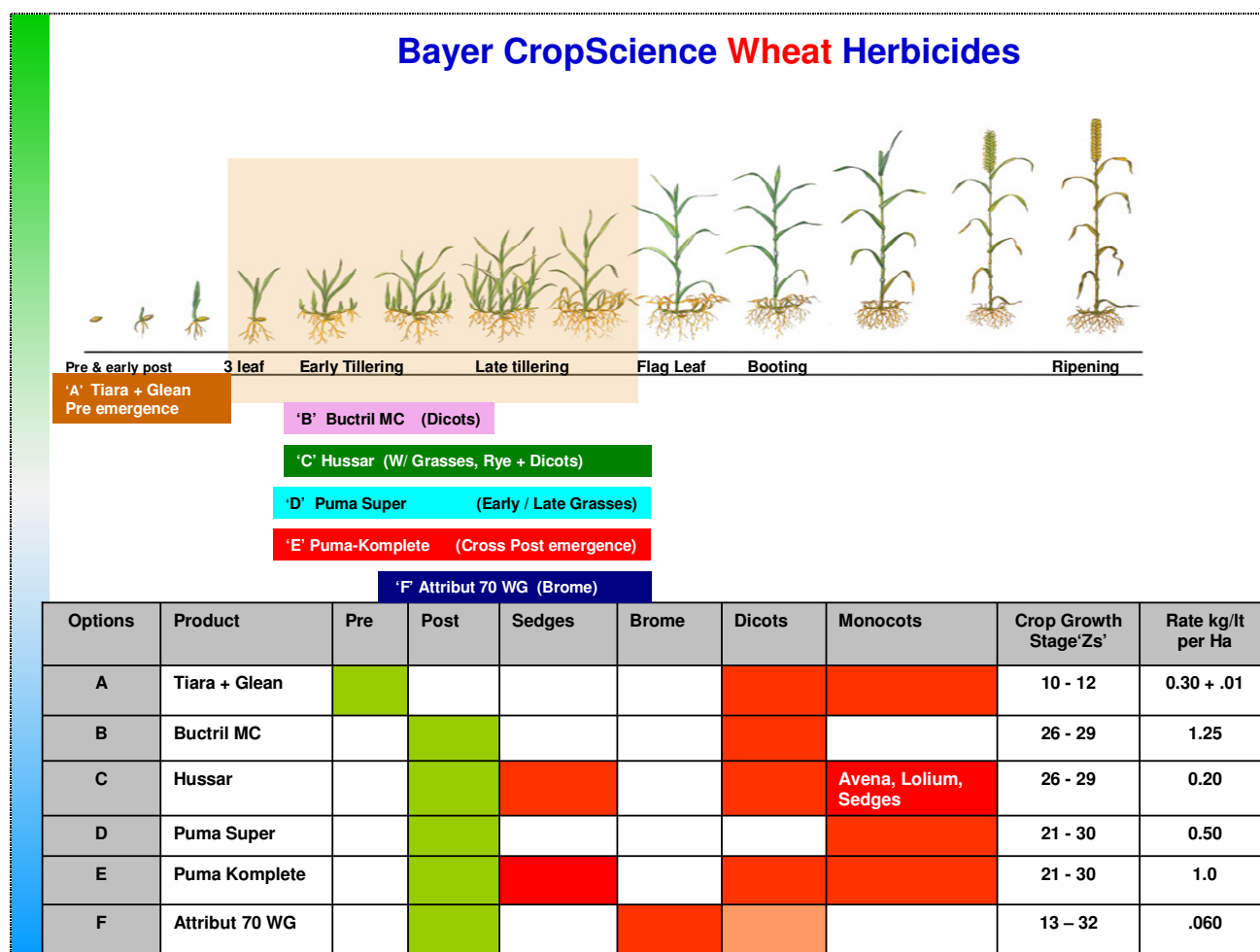




WHEAT WEEDS CONTROL

Weeds are unwanted plants with characteristics that allow them to thrive under the same growing conditions needed for the target crop. Weeds compete with the crop for light, nutrients, water, and space and contaminate the harvested produce. Weeds eventually decrease the crop vigour, limiting the number, size and the quality of harvested grains. Weeds also serve as hosts of diseases and pests all adding to poor yields.

Bayer CropScience has appropriate pre and post emergence herbicides for sustainable safeguard of wheat crop during the vulnerable growth stage.



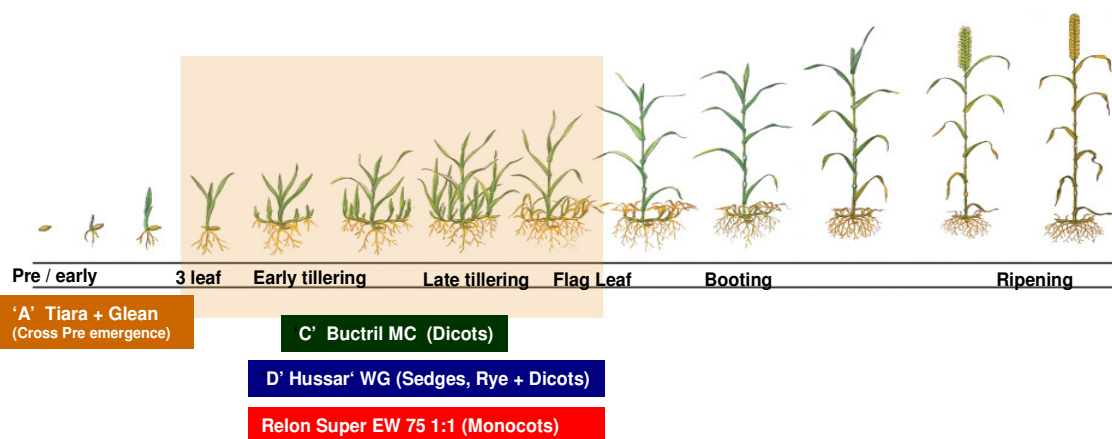


BARLEY: WEEDS CONTROL

Barley growing, like any other crop, is a demanding business. Weeds if not controlled erode the value of the crop tremendously. To protect this crop value, a well balanced broadleaf and grasses herbicide portfolio is a must.

Bayer CropScience diversity, innovation and expertise has earned farmers confidence worldwide through provision of herbicides that the farmers' trust.

Bayer CropScience Barley Herbicides - Options



Options	Product	Pre	Post	Sedges	Brome	Dicots	Monocots	Crop Stage'Zs'	Rate Ha kg/lt
A	Tiara + Glean	■				■	■	Pre-em Early post	0.30 + 0.01
B	Buctril MC		■			■		26 - 29	1.25
C	Hussar WG		■	■		■	Avena, Lolium, Sedges	21 - 30	0.20
D	Relon Super 75 EW 1:1		■				■	21 - 30	1.0 lt



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CEREAL FOLIAR DISEASES CONTROL

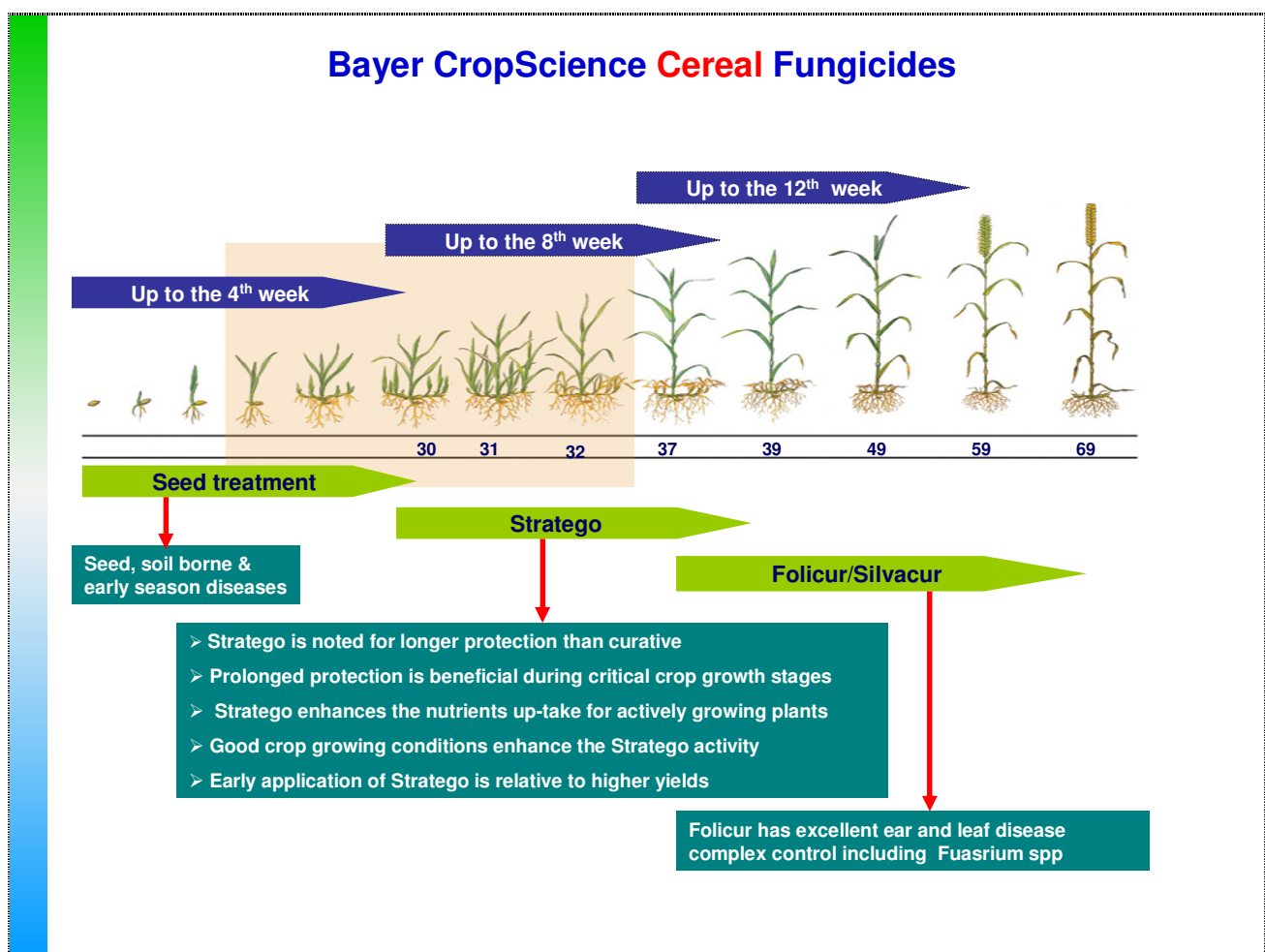
Cereal diseases are among the most highly ranked factors that negatively impact on the yields.

Although most of foliar diseases are effectively managed by timely application of appropriate fungicides, diseases such as Fusarium that cause significant yield loss through:-

- Shriveled grains with less weight
- Less numbers of grains per ear
- Poor seed quality
- Poor baking quality and
- Mycotoxins (deoxynivalenol-DON)....

.....call for an Integrated Crop Management.

Bayer CropScience has an excellent fungicide portfolio that fits in an ICM programme for controlling Fusarium among other cereal diseases.





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CEREAL PESTS AND CONTROL

Insects are known to have serious economic impact on cereal crops through: -

- Direct crop injury – feeding on the leaves, stem and the ear. This results to less shrivelled grains per ear culminating to lower yield.
- Aphids for instance are vectors for crop diseases such as Barley Yellow Dwarf Virus that equally cause heavy crop losses.

Bayer CropScience focuses with expertise on life cycle management of well-established products through innovative formulations and solutions.

Bayer CropScience Cereal insecticides

Pests spectrum

RWA, Cereal Aphids
(vectors for BYDV)
Bollworms & other
caterpillars

Bullock Star (*beta-cyfluthrin +
chlorpyrifos 12.5 + 250 g/l*)

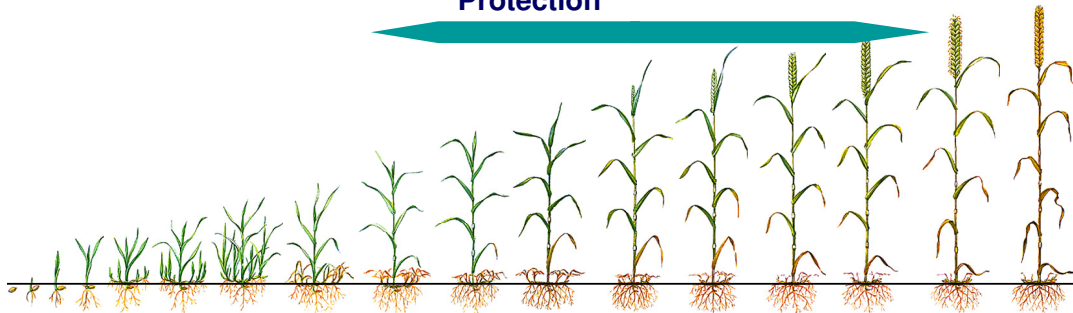
Rate – 0.45 – 0.60 l/ha

OR

Decis Forte (*deltamethrin
100g/l*)

Rate – 0.10 – 0.12 l/ha

Foliar Insecticide Protection





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NEW

Plonuran liquid[®]

The basis for healthy and high-yielding cereal crops

Plonuran liquid[®] is a concentrate copper fertiliser based on copper hydroxide 300g/Cu per litre for use in cereals. Cereals and other plants easily absorb **Plonuran liquid[®]** due of its formulation.

Copper is absolutely necessary for the normal and healthy development of cereal crops. In extreme cases the lack of copper may lead to heavy loss of the harvest.

The copper in **Plonuran Liquid[®]** acts as a micro element and plays a great role in plant metabolism.

It enables: -

- Better absorption and assimilation of Nitrogen
- Higher protein content in the grains
- Higher yields
- Higher pollen fertility and therefore more grains per ear
- Uniform growth
- Less tendency to abnormal formation of shoots
- Stimulation of lignification and as a result better stability of stems
- Higher frost resistance
- Better resistance to fungal diseases

RATE OF USE

400mls per hectare in 200-400ltrs of water