

BASF
We create chemistry



Clearfield[®]
Production System

Clearfield[®] Stewardship

Growing for the future, today.

Wheat

Barley

Canola

Sorghum*

*Intervix[®] now expands to igrowth[®] sorghum varieties.

Welcome to **Clearfield** Stewardship

Welcome to BASF's **Clearfield** Production Systems with advanced stewardship.

BASF is committed to delivering a high-quality **Clearfield** Production System that helps deliver maximum yield potential and remains effective for the long term. Stewardship guidelines exist for both the seed and chemistry, ensuring high seed quality and purity, as well as adequate crop tolerance to **Intervix**[®] herbicide.

Clearfield crops were introduced into Australia in 2000, with **Clearfield** canola being the first crop. Since then, **Clearfield** wheat, **Clearfield** maize, **Clearfield** Plus wheat and **Clearfield** barley have been added to the portfolio of crops.

With the growing of **Clearfield** Production System crops comes the responsibility of all parties (BASF, seed breeders, **Clearfield** agencies, **Clearfield** accredited agronomists and growers) to manage the sustainability of the **Clearfield** Production System.

Chemistry stewardship is equally important and we recommend four key agronomic good practices be followed for all **Clearfield** crops.

Clearfield Production Systems provide a clear route to high-yielding, high-quality and ultimately, more profitable crops. We look forward to a rewarding industry partnership with **Clearfield**.

Four key agronomic practices for your **Clearfield** Production Systems:

- 1** Utilise **crop rotation**.
- 2** Use herbicides with different **modes of action**. Do not solely rely on ALS-inhibiting herbicides, such as **Intervix** herbicide, for more than two out of four years, unless other weed-control practices are implemented on target weed species.
- 3** Properly **manage weeds in crop-fallow rotation**.
- 4** Properly **control volunteer Clearfield** plants.



Application Timings

Clearfield barley

Apply to **Clearfield** barley crops from the 5 leaf stage to 1st node stage (Z31). DO NOT apply after 1st node stage (Z31).



Clearfield Plus wheat

Intervix herbicide is NOT for use on **Clearfield** wheat varieties **Clearfield** STL and **Clearfield** JNZ. Only apply to **Clearfield** Plus wheat crops from the 3 leaf stage to 1st node stage (Z31). DO NOT apply after 1st node stage (Z31).



Clearfield canola

Apply to canola crop at the 2 to 6 leaf stage. Apply to actively growing weeds in the 3-leaf to 2-tiller stage and broadleaf weeds in the 2 to 6 leaf stage. DO NOT apply **Clearfield** canola after 6 leaf stage.



New registration igrowth sorghum

Apply to **igrowth**® Sorghum hybrids from the 2 to 6 leaf stage. **Intervix** should be used in combination with alternative pre and post emergent herbicides to reduce pressure and slow the development of herbicide resistance.



Correct Application is Important

It is important that **Intervix** herbicide is applied as per the label recommendations to ensure weed species are either controlled or suppressed.

To achieve the best result with **Intervix** herbicide the following is recommended:

- Apply only to actively growing weeds which are not stressed.
- Apply in a minimum water volume of 70L/ha.
- Apply as early as possible within the application window to maximise efficacy (see Application Timings).

Tank mixes with other herbicides can broaden the range of weeds controlled. For further information please refer to label directions for product compatibility and recommended tank mixes.

Resistance Management

To preserve the effectiveness of any herbicide a good resistance management approach is recommended. **Intervix** herbicide is a Group B herbicide. Other group B (ALS inhibitors) include sulfonylureas, and triazolopyrimidines (sulphonamides). To assist with resistance management, rotate **Clearfield** winter crops with spring crops to break the cycle of winter annual weeds and allow the use of alternate site of action herbicides. If winter cropping is rotated with a fallow season, control weeds before they set seed and use alternate mode of action herbicides. ALS-inhibiting herbicides should not be used more than 2 out of 4 years.

Understanding **Intervix** Herbicide and Associated MRLs

Intervix herbicide can be used with confidence in **Clearfield** barley, **Clearfield** Plus wheat and **Clearfield** canola. BASF conducts rigorous trials both within Australia and internationally to ensure product performance.

Maximum Residue Limits (MRLs) in export destinations may be different to those in Australia. In some countries, in the absence of an established MRL a default of 0.01ppm is established. The use of **Intervix** herbicide according to the label provides confidence for MRL compliance. BASF cannot be certain of outcomes if the use of **Intervix** herbicide occurs outside of registered label recommendations. In order to ensure Australia's position as a leading high quality grain exporter, always use the registered product to avoid the potential for MRL breaches in export destinations.

Every country registers chemicals under their own regulations and according to their domestic use pattern. Differences between Australia and overseas MRLs may occur for a number of reasons. These include different use patterns (presence of pests in one country but not in another, uses on the same crop but at different concentrations for control of different pests), toxicological considerations (ADIs), analytical methodology and/or residue definition. (Reference:www.apvma.gov.au)



The **Clearfield** Production System

Clearfield and **Clearfield** Plus crops are highly valuable tools for Australian growers to optimise production in several grain crops such as barley, canola and wheat varieties. Herbicide-tolerant **Clearfield** and **Clearfield** Plus crops simplify control of hard-to-kill weeds with high yielding non-GMO varieties.

The **Clearfield** and **Clearfield** Plus Production Systems combine:

- High yielding, herbicide-tolerant varieties from Australia's leading plant breeders and seed companies. These varieties are not GMOs and are tolerant to **Clearfield** imidazolinone herbicides.
- Custom-designed **Clearfield** herbicides for knockdown and residual weed control.
- **Clearfield** stewardship program.

Crops with **Clearfield** traits are now available in a number of forms:

- **Clearfield** wheat varieties: tolerant to and registered for OnDuty® herbicide.
- **Clearfield** Plus wheat varieties: tolerant to and registered for **Intervix**® herbicide.
- **Clearfield** barley imidazolinone tolerant to and registered for **Intervix** herbicide.
- **Clearfield** canola varieties: tolerant to and registered for OnDuty herbicide and **Intervix** herbicide.
- **Clearfield** maize varieties: tolerant to and registered for Lightning® herbicide.
- **igrowth**® Sorghum hybrids developed specifically to be tolerant to and registered for **Intervix** herbicide.

These registrations enable growers to control over 40 weed species including annual ryegrass, brome grass, barley grass, volunteer cereals, climbing buckwheat and wild oats, using either:

- OnDuty on **Clearfield** JNZ or STL wheat.
- **Intervix** on **Clearfield** Plus wheat varieties or **Clearfield** Barley.
- **Intervix** or OnDuty on **Clearfield** canola.
- Lightning on **Clearfield** maize.
- Intervix on **igrowth** sorghum hybrids.

*“Control over 40 weed species with **Clearfield** Production Systems.”*



Supporting Resources

Resistance Management

CropLife Australia-Industry Stewardship-Resistance Management website
www.croplife.org.au

Clearfield Production System

Clearfield Stewardship Best Management Practice, visit
www.crop-solutions.basf.com.au

ALWAYS READ AND FOLLOW LABEL DIRECTIONS.

This brochure is intended as general advice. Disclaimer: The information submitted in this publication is based on current BASF knowledge and experience. In view of the many factors that may affect its application, this data does not relieve the user from carrying out their own tests. The data does not imply assurance of certain properties or of suitability for a specific purpose. It is the responsibility of the user to ensure that any proprietary rights and existing laws and legislation are observed.

For more information call 1800 558 399 or visit crop-solutions.basf.com.au

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