



Stewardship Guidelines for CLEARFIELD[®] Lentil

BASF is committed to the long-term sustainability of the **CLEARFIELD** Production System. The stewardship initiatives co-developed by BASF and university researchers are designed as guidelines for **CLEARFIELD** Lentil producers in an effort to preserve this herbicide-tolerance technology for years to come. More specifically, **CLEARFIELD** Lentil producers are asked to follow specific management practices designed to prevent and/or delay herbicide resistance development in weed populations plaguing lentil production areas of the United States.

The key recommendations for proper stewardship of **CLEARFIELD** Lentils are as follows:

Mandatory practices

- Growers must purchase certified seed every year from a **CLEARFIELD** seed dealer.
 - Saving seed to plant next year's crop is NOT allowed and thus no bin-running or brown bagging **CLEARFIELD** Lentil seed. The use of certified seed ensures an acceptable and approved degree of trait expression including herbicide tolerance in the **CLEARFIELD** variety purchased and planted. Second generation or bin-run seed may naturally vary in its degree of trait expression (i.e., herbicide tolerance, disease resistance, etc.). Certified seed also reduces the risk of spreading weed seed and seed-borne diseases.
- Proof-of-purchase records for **CLEARFIELD** Lentil seed and **Beyond**[®] herbicide must be provided to BASF prior to servicing any crop claim. Use of **Beyond** herbicide should be done in accordance with the product label, including stated label rate and timing.

Strongly recommended practices

- Utilize crop rotation.
 - Lentil is recommended in the rotation 2 out of 4 years. This will allow for the use of herbicides with an alternate mode of action. In addition, the crop rotation recommendations were based on moisture limitations and cultural practices for optimal disease management in Lentil production.
- **CLEARFIELD** Lentil is not recommended in rotation with any other **CLEARFIELD** crop, such as but not limited to, wheat, canola, sunflowers, etc.
- Use herbicides with different mode of action.
 - One should not solely rely on ALS-inhibiting herbicides, such as **Beyond** herbicide, in no more than 2 out of 4 years unless other weed control practices are implemented on target weed species.
 - Where applicable, use sequential or tank-mix partner herbicides with alternate and/or multiple modes-of-action, ex., **Poast**[®] herbicide.
- Properly manage weeds in crop-fallow rotation.
 - In a fallow year, growers should control weeds through the use of tillage or burn-down (non-ALS) herbicides, ex., RoundUp[®].
- Properly control volunteer **CLEARFIELD** Lentil.
 - Volunteer **CLEARFIELD** Lentil should be controlled with use non-ALS herbicides, ex., 2,4-D, MCPA, etc.
 - In general, volunteer lentils are poor agronomic competitors relative to rotational crops, i.e., wheat, due to 1) low seed dormancy and survivability as weeds to be present in succeeding crop, and 2) numerous herbicide control options.
- ALWAYS follow an integrated weed management program that includes herbicides, cultural practices and crop rotation in an effort to manage weed populations and minimize weed seed development.
- ALWAYS control volunteer plants in the season following a **CLEARFIELD** Lentil crop.
- Use practices that minimize the likelihood of out-crossing to similar crops or related weeds.
- Follow the best management practices designed to protect the **CLEARFIELD** novel-trait technology as outlined in these Stewardship Guidelines for **CLEARFIELD** Lentil.

ALWAYS READ AND FOLLOW LABEL DIRECTIONS.

* **Beyond**, **CLEARFIELD** and **Poast** are registered trademarks of BASF

RoundUp is a registered trademark of Monsanto.

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