Weed Management in Cotton Under the BXN ® System

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Weed management in cotton has taken a new twist with the introduction of transgenic cotton. Some cotton plants have been genetically altered to make them tolerant to a particular herbicide.

One cotton-herbicide system is built around Buctril® 4EC (bromoxynil)—the BXN® System. Research has demonstrated that this system is an effective tool for the management of many broadleaf weeds, including annual morning-glory species *(Ipomoea* spp.), buffalobur *(Solanum rostra-tum),* cocklebur *(Xanthium strumarium),* jimsonweed *(Datura stramonium),* and spurred anoda *(Anoda cristata)*—weeds common to many New Mexico cotton fields. In addition, BXN® may provide some control of kochia *(Kochia scoparia)* and pigweed species *(Amaranthus* spp.), though the size of the weed is critical in achieving good results

The marketer of BXN® cotton varieties are Stoneville Pedigreed Seed. BXN® cotton contains a gene that produces nitrilase, an enzyme that gives cotton the ability to metabolize the bromoxynil herbicide when applied over-the-top to the emerged crop.

ROTATION RESTRICTIONS

- Following the 1.0 pint/acre Buctril® 4EC application, wait a minimum of 30 days from the date of application before planting rotational crops.
- Following the application of more than 1.0 pint/acre Buctril® 4EC, only BXN cotton can be planted in the field the following year. As research is completed, this portion of the crop rotation information may be modified.

APPLICATION INFORMATION

Timing:	Broadcast or banded
Spray volume:	15 gallons or more
Spray pressure:	40 psi or more
Spray tips:	Flat fan using a 50 mesh screen
Use rate:	0.75 to 1.0 pint (16 fl oz) Buctril® 4EC/acre/application

No more than three (3) applications per growing season:

- First application should be applied early when weeds and cotton are small.
- Second application should be applied 10 to 14 days following the first.
- Third application should be made during the bloom stage, but not later than 75 days before harvest.

No more than three (3) pints Buctril® 4EC per growing season.

GUIDELINES, PRECAUTIONS, AND GENERAL COMMENTS

- Use Buctril® 4EC only on cotton that has been genetically modified for this use.

- The use of a preplant incorporated (PPI) or pre-emergence (PRE) herbicide is recommended to enhance the level of weed management. Buctril® 4EC will not control grass or nutsedge.

- Do not exceed two (2) applications before the cotton is 12" tall.

- Make applications to actively growing weeds in the correct stage of growth. Weeds under stress will not respond well.

- Cultivation should be delayed 5-7 days following application.

- Tank mixes:

  - The addition of MSMA when the cotton is 3" tall will enhance the activity on pigweed.

  - Do not tank mix Buctril® 4EC with post emergence grass herbicides (Fusilade DX®, Poast®, Poast Plus®, and Assure II®). Applications need to be made sequentially. If Buctril® 4EC is applied first, wait at least 7 days before making the grass herbicide application. If the grass herbicide is applied first, then wait 3 days before making the Buctril® 4EC application.

  - Do not graze any portion of the crop.

  - Do not cut crop for seed or fodder.