

New Herbicides and Uses for 2009

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There are a number of new herbicide and bio-tech options for weed control in corn, soybeans, and sorghum available to Nebraska producers.

Corn Herbicides

- **Balance[®] Flexx** [isoxaflutole (2 lb ai/gal) + cyprosulfamide (safener)]. Bayer CropScience. EPA Reg. No. 264-1067. Strengths: kochia, velvetleaf, waterhemp and other pigweeds, eastern black nightshade, lambsquarters, giant foxtail and woolly cupgrass.

The concentration of isoxaflutole in Balance Flexx is lower compared to Balance Pro. Consequently, product use rates will be higher and will range from 3 to 5 oz/ac. The safener cyprosulfamide will reduce the risk of corn injury and will accommodate early post-emergence applications. Balance Flexx may be applied as a pre-plant burndown, pre-emergence or early post-emergence (up to V2 corn). Tank-mixing with atrazine will enhance control on some large-seed broadleaves such as cocklebur, sunflower and morningglories.

- **Corvus[®]** [isoxaflutole (1.88 lb ai/gal) + thien carbazole-methyl (0.75 lb ai/gal) + cyprosulfamide (safener)]. Bayer CropScience. EPA Reg. No. 264-1066. Strengths: kochia, velvetleaf, waterhemp and other pigweeds, eastern black nightshade, lambsquarters, barnyardgrass, crabgrass, foxtails (giant, green and yellow) and woolly cupgrass.

Corvus contains a new active ingredient, thien carbazole-methyl, which is an ALS-inhibitor that controls grass weeds. The new safener, cyprosulfamide, safens isoxaflutole and thien carbazole-methyl. Corvus may be applied as pre-plant burndown, pre-emergence or early post-emergence (up to V2 corn). Tank-mixing with atrazine will enhance control on some large-seed broadleaves such as cocklebur, sunflower and morningglories. If weeds are present (and corn has not emerged), Corvus is effective as a burndown herbicide on many weeds with the addition of COC or MSO.

- **NIC-IT[™]** [nicosulfuron (2 lb ai/gal)]. Cheminova. EPA Reg. No. 67760-74. Strengths: barnyardgrass, fall panicum, foxtails (giant, green and yellow), sandbur and shattercane.

NIC-IT is a liquid formulation of nicosulfuron (same active ingredient as Accent herbicide). It is labeled for selective post-emergence grass control in field

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corn, popcorn and sweet corn. Crop response and weed control performance has been similar to Accent herbicide in University of Nebraska trials.

- **Require™ Q** [rimsulfuron (6.25%) + dicamba (52.94%) + isoxadifen-ethyl (safener)]. DuPont. EPA Reg. No. 352-761. Strengths: cocklebur, kochia, redroot pigweed, Russian thistle, barnyardgrass, foxtails (giant, green and yellow) and shattercane.

Require Q is for post-emergence grass and broadleaf control in field corn. It can be applied from V2 to V7. It will provide residual control and enhanced control of large seed broadleaf weeds such as cocklebur and morningglories in tank-mixtures with glyphosate. Isoxadifen-ethyl is a new safener that enhances crop tolerance to both rimsulfuron and dicamba.

- **Resolve™ Q** [rimsulfuron (18.4%) + thifensulfuron (4%) + isoxadifen-ethyl (safener)]. DuPont. EPA Reg. No. 352-777. Strengths: kochia, redroot pigweed, barnyardgrass, foxtails (giant, green and yellow) and shattercane.

Resolve Q is for post-emergence grass and broadleaf control in field corn. It can be applied from emergence to V7. It will provide residual control for many species when tank-mixed with glyphosate in glyphosate resistant corn. Isoxadifen-ethyl is a new safener that enhances crop tolerance to both rimsulfuron and thifensulfuron.

- **Valor® SX** [flumioxazin (51%)]. Valent. EPA Reg. No. 59639-99. Strengths: eastern black nightshade, kochia, lambsquarters, redroot pigweed, waterhemp, henbit, field pennycress, prickly lettuce, shepherdspurse and maretail.

Valor SX received a supplemental label for spring burndown applications before no-till and minimum till corn. It can be applied 14 to 30 days before corn planting at rates up to 2 oz/ac. It provides good burndown and residual activity on many broadleaf annual weed species. Burndown activity can be enhanced by tank mixing with 2,4-D or glyphosate.

Soybean Herbicides

- **Authority Assist 4SC®** [sulfentrazone (33.3%) + imazethapyr (6.67%)]. FMC. EPA Reg. No. 279-3330. Strengths: eastern black nightshade, cocklebur, kochia, lambsquarters, morningglories, redroot pigweed, Russian thistle, smartweed, velvetleaf, waterhemp, green foxtail and yellow foxtail

Authority Assist can be applied in the fall, as an early spring burndown or pre-plant or pre-emergence for control of many broadleaf and sedge weeds in soybeans. Use rates of 4 to 6 oz/ac are appropriate when used as a setup product in glyphosate tolerant soybeans (4 oz on lighter/sandy soils and 5 to 6 oz on soils with higher amounts of silt and clay). 6 to 12 oz/ac (soil type and organic

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matter dependant) are appropriate when used as the primary herbicide for weed control in conventional soybeans.

- **Enlite**[®] [chlorimuron (2.85%) + flumioxazin (36.21%) + thifensulfuron (8.8%)]. DuPont. EPA Reg. No. 352-757. Strengths: eastern black nightshade, cocklebur, kochia, lambsquarters, marestail, morningglories, pigweeds, ragweeds, Russian thistle, smartweed, sunflower, velvetleaf and waterhemp.

Enlite is labeled for fall and spring burndown and pre-emergence broadleaf weed control in soybeans. It can be applied up to 2.8 oz/ac. It can be tank-mixed with 2,4-D or glyphosate for burndown of weeds larger than 1 to 3", or with other residual herbicides for pre-emergence applications. In Nebraska, Enlite is labeled for use north of highway 30 and west of highway 281.

- **Envive**[®] [chlorimuron (9.2%) + flumioxazin (29.2%) + thifensulfuron (2.9%)]. DuPont. EPA Reg. No. 352-756. Strengths: eastern black nightshade, cocklebur, kochia, lambsquarters, marestail, morningglories, pigweeds, ragweeds, Russian thistle, smartweed, sunflower, velvetleaf and waterhemp.

Envive is labeled for fall and spring burndown and pre-emergence broadleaf weed control in soybeans. The application rate (2.5 to 5.3 oz/ac) depends on soil organic matter. It can be tank-mixed with 2,4-D or glyphosate for burndown of weed larger than 1 to 3", or other residual herbicides for pre-emergence applications. In Nebraska, Envive is labeled for use south of highway 30 and east of highway 281.

Corn & Soybean Herbicides

- **Cadet**[™] [fluthiacet-methtyl (0.91 lb ai/gal)]. FMC. EPA Reg. No. 279-3338. Strengths: velvetleaf and lambsquarters.

Cadet will be marketed for post-emergence control of velvetleaf and other broadleaf weeds in soybeans, field corn, sweet corn, and popcorn. Its primary strength is velvetleaf and is a good tank-mix partner with glyphosate in areas with heavy velvetleaf populations.

- **Ignite**[®] **280 SL** [glufosinate (2.34 lbs ai/gal)]. Bayer Crop Science. EPA Reg. No. 264-829. Strengths: lambsquarter, morningglories, smartweeds, velvetleaf, crabgrass, giant foxtail and yellow foxtail.

Ignite is labeled for burndown or broad spectrum post-emergence weed control in any crop designated LibertyLink (tolerant of glufosinate). Ignite 280 SL contains the same active ingredient as Liberty, but at a higher concentration (2.34 lb ai/gal). The use rate in all Liberty Link crops will be 22 oz/ac and two applications (up to 44 oz/ac) can be applied per acre each year.

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- **Kixor**[®] [saflufenacil]. BASF. The label is anticipated in the second half of 2009. Kixor is a new herbicide from BASF. Its mode of action is PPO inhibitor, similar to flumioxazin (Valor SX) and sulfentrazone (Spartan). Kixor will be labeled for pre-plant or pre-emergence application in corn, sorghum, soybean, small grains and tree/nut/vine cropping systems. It has good foliar and residual activity on broadleaf weeds in both no-till and tilled cropping systems.

Sorghum Herbicides

- **Lumax**[®] [S-metolachlor (2.68 lb ai/gal) + atrazine (1 lb ai/gal) + mesotrione (0.268 lb ai/gal)]. Syngenta. EPA Reg. No. 100-1152. Strengths: eastern black nightshade, kochia, lambsquarters, redroot pigweed, ragweeds, Russian thistle, smartweed, sunflower, velvetleaf, waterhemp, barnyardgrass, crabgrass, fall panicum and foxtails (giant, green and yellow).

Lumax has been labeled for use in sorghum treated with Concept III in Nebraska and Kansas. The use rate will be 2.5 qt/ac and it can be applied in a single pre-plant application (7 to 14 day before planting) or in split applications (either 1.5 qt/ac pre-plant followed by 1.0 qt/ac pre-emergence or 1.25 qt/ac pre-plant followed by 1.25 qt/ac pre-emergence).

Bio-Tech Traits

- **LibertyLink**[®] soybeans are a new bio-tech trait available to Nebraska soybean growers. There will be a limited number of varieties available in 2009, but it has received European and Chinese approval. Ignite is an effective herbicide when used correctly. It should be applied when weeds are small (less than 4"), in a minimum 15 GPA carrier volume and with AMS at 17 lb/100 gal. A residual burndown or pre-emergence herbicide labeled for soybean should be applied to maximize yield and weed control and protect against herbicide resistance. LibertyLink soybeans are an alternative to glyphosate resistant soybeans. This trait will give soybean growers an additional mode of action to utilize in their soybean weed control programs and reduce the risk of herbicide resistance.

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