WEED CONTROL

The igrowth™ technology in sorghum was developed by Advanta Seeds™ through mutagenesis methods and provides tolerance to herbicides of the Imidazolinone family. These materials allow farmers to apply herbicides (Inovat™) at the recommended doses to use with igrowth™ sorghum plants without causing damage. If this herbicide were to be applied on sorghum without this technology, it could cause death or irreversible damage to the crop.

What Is the igrowth™ Technology?

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NEW TECHNOLOGY

PROPOSAL OF USE

To obtain a good result, it is important to evaluate the Weed situation of the lot and use the more appropriate agronomic criteria to each situation. Weed monitoring is a fundamental piece for decision making. It is important to note that the Inovat® can be used as PREEMERGENT or POST-EMERGENCE herbicide (the weeds absorb the herbicide by leaf and roots). And that the better controls as post-emergent are obtained when applying the same in very early stages of the weeds (from 2 to 4 leaves according to the species).

SITUATIONS OF USE

Case 1: Presence of weeds normally controlled by Atrazine + Inovat® and the following grasses:
- Capin (Echinochloa crus-galli)
- Pasto colorado (Echinochloa colonum)
- Pasto cuarisma (Digitaria sanguinalis)
- Pasto bandera (Urochloa patryphylla)
- Sorgo de apepo (Sorghum halepense)

APP Y IN PRE-EMERGENCE: 2 to 3 liters / ha of atrazine 50% + 1 to 1.5 lts / ha of Inovat® (in case of emerged weeds on the day of sowing, it is recommended to control them with glyphosate or mixtures of glyphosate with hormonal according to the species present in the lot).

NOTE: In the presence of Eleusine (Eleusine indica) and Capin arroz (Echinochloa crus-galli) resistant to imidazolinones, the use of 1 l / ha of 5-methylalic is recommended in pre-emergence taking the precaution of using seed treated with Concep®.

Case 2: Presence of weeds normally controlled by Atrazine + Inovat®, annual grasses normally controlled by Inovat® + high infestation of Cebollín and / or Sorgo de alepo.

APPLY IN PRE-EMERGENCE: 2 to 3 liters / ha of atrazine 50% + 1 to 1.5 lts / ha of Inovat® (in case of emerged weeds on the day of sowing, it is recommended to control them with glyphosate or mixtures of glyphosate with hormonal according to the species present in the lot).

Based on monitoring and level of infestation of Cyperus and / or johnsongrass, a second application of 1 lt / ha of Inovat® in POST-EMERGENCE:
Cyperus between 3 and 7 leaves / Johnsongrass between 10 and 15 cm.

Inovat™ is a herbicide that has systemic and residual action, which allows controlling the weeds present until that moment, as well as those that germinate later until the canopy closing.

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WEEDS CONTROLLED BY INOVAT

**BROADLEAVED**

- Abrojillo (Xanthium strumarium)
- Chamico (Datura feroz)
- Cien nudos (Polygonum aviculare)
- Enredadera anual (Polygonum convolvulus)
- Lengua de vaca (Rumez crispus)
- Ortiga (Urtica urens)
- Ortiga mansa (Lamium amplexicaule)
- Perejilillo (Bidens pilosa)
- Bejucos (Ipomoea spp)
- Chinchilla (Tagetes bonaeriensis)
- Malva cimarrona (Anoda cristata)
- Quinoa blanca (Chenopodium album)
- Revienta caballo (Solanum sisymbrifolium)
- Verdolaga (Portulaca oleracea)
- Capín arroz (Echinochloa crusgalli)
- Pasto colorado (Echinochloa colorans)
- Pasto cuarenta (Digitaria sanguinalis)
- Sorgo de alepo de semilla (Sorghum halepense)
- Cebollín (Cyperus rotundus)

**GRASSES**

- Capín arroz (Echinochloa crusgalli)
- Pasto colorado (Echinochloa colorans)
- Pasto cuarenta (Digitaria sanguinalis)
- Sorgo de alepo de semilla (Sorghum halepense)

**CYPERACEOUS**

- Cebollín (Cyperus rotundus)

**MOMENT OF APPLICATION**

- Up to 4 leaves
- Up to 4 leaves
- Up to 4 leaves
- Up to 4 leaves
- Up to 4 leaves
- Up to 4 leaves
- Up to 10 cm
- Up to 10 cm
- Up to 2 leaves
- Up to 2 leaves
- Up to 2 leaves
- Up to 2 leaves
- Up to 2 leaves
- Until rosette 10 cm
- Until rosette 10 cm
- Until rosette 10 cm
- Between 3 and 7 leaves

**GOOD PRACTICES FOR THE MANAGEMENT OF TOLERANT CROPS TO HERBICIDES**

**PROPER MANAGEMENT OF HERBICIDE TOLERANT CROPS**

It is important to properly handle crops with herbicide tolerance technology in order to preserve the efficacy and value of these technologies in the future. If you have any questions after reviewing this information, please contact your local Advanta distributor or agronomist.

**IMPORTANCE CONSIDERATIONS**

- The use of a certain herbicide-tolerant crop does not limit the farmer to use just that herbicide. The conventional herbicides registered for the crop can and should continue to be part of the general system of management against weeds.
- Limit the number of applications of the same herbicide, or herbicides in the same way, in the same campaign.
- Use mixtures or sequential treatments alternating modes of action in an effective way to control the target weeds.
- Use alternative practices for the management of weeds, such as crop rotation, tillage and deferred planting.
- Clean the machinery before moving it from one field to another, to minimize the dispersion of weed seeds.
- Control the fields after making the spraying of herbicides to detect probable control failures.
- If a potential weed (or weed population) is found resistant, use the available control methods to avoid dispersion in the field.

**USAGE RESTRICTIONS**

The application of herbicide and planting of the subsequent crop must be separated by 120 days. Until further information is available, sowing of the following crops after the INOVAT-treated crop is recommended: soybean, pea, lentil, pea, peanut, alfalfa, clover, oats, barley, ryegrass, wheat, corn, white clover, yellow clover, dactylis, bromus, fescue, annual ryegrass, and perennial ryegrass.

**NEW PRESENTATIONS**

Igrowth™ sorghums will be commercialized in 600,000 seeds bags aimed at raising the level of technological management of the crop, as it will facilitate the calculation of the number of bags needed to achieve the desired planting densities.

When moving from sowing density objectives measured in kg of seed / ha to objectives measured in number of seeds / ha, it will improve the accuracy of the plant stand to achieve and the uniformity in the distribution, allowing the crop to better express its genetic potential (sowing to plate vs. trickle dosing).

Finally, sorghum being a crop of high response to fertilization, achieving the right densities will result in a Greater efficiency in the use of nutrients.