



WEED CONTROL

FIRST TECHNOLOGY OF HERBICIDES TOLERANCE IN SORGHUM DEVELOPED IN ARGENTINA FOR THE WORLD

What Is the **igrowth™** Technology?

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.

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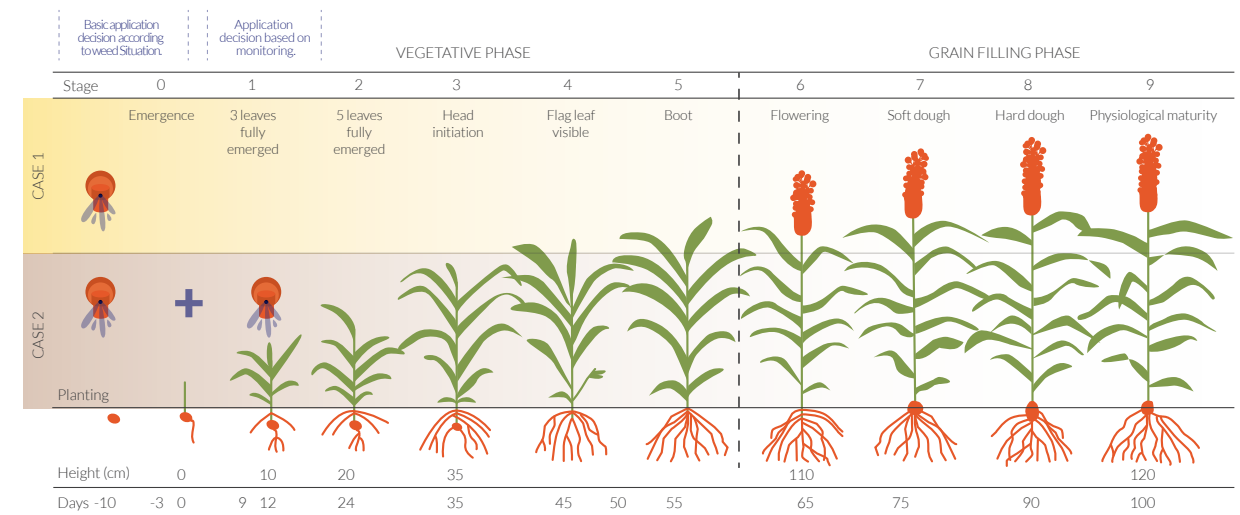
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PROPOSAL OF USE

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 are obtained when applying the same in very early stages of the weeds (from 2 to 4 leaves according to the species).

To control emerged weeds, always use with the aggregate of ammonium sulphate between 1 and 2% of the volume of the tank mix to be made and 1 lt / ha of methylated soybean oil. The spraying must be done with good environmental conditions so that weeds can be reached, which must be in active growth. 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.



SITUATIONS OF USE

Case 1: Presence of weeds normally controlled by Atrazine + Inovat® and the following grasses:

- Capin (Echinochloa crusgalli)
- Pasto colorado (Echinochloa colonum)
- Pasto cuaresma (Digitaria sanguinalis)
- Pasto bandera (Urochloa patyphylla)
- Sorgo de apepo (Sorghum halepense)

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)

NOTE: in the presence of Eleusine (Eleusine indica) and Capin arroz (Echinochloa crusgalli) resistant to imidazolinones, the use of 1 l / ha of S-metolachlor is recommended in preemergence 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 Cebollin 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 johnson grass, a second application of 1 lt / ha of Inovat® in POST-EMERGENCE:

Cyperus between 3 and 7 leaves / johnson grass between 10 and 15 cm

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.

WEEDS CONTROLLED BY INOVAT

WEEDS

BROADLEAVED

WEEDS	MOMENT OF APPLICATION
Abrojillo (<i>Xanthium strumarium</i>)	Up to 4 leaves
Chamico (<i>Datura feroz</i>)	Up to 4 leaves
Cien nudos (<i>Polygonum aviculare</i>)	Up to 4 leaves
Enredadera anual (<i>Polygonum convolvulus</i>)	Up to 4 leaves
Lengua de vaca (<i>Rumez crispus</i>)	Up to 4 leaves
Ortiga (<i>Urtica urens</i>)	Up to 4 leaves
Ortiga mansa (<i>Lamium amplexicaule</i>)	Up to 4 leaves
Perejilillo (<i>Bowlesia incana</i>)	Up to 4 leaves
Amor seco (<i>Bidens pilosa</i>)	Up to 2 leaves
Bejucos (<i>Ipomoea spp</i>)	Up to 2 leaves
Chinchilla (<i>Tagetes bonaerensis</i>)	Up to 2 leaves
Malva cimarrona (<i>Anoda cristata</i>)	Up to 2 leaves
Quinoa blanca (<i>Chenopodium album</i>)	Up to 2 leaves
Revienta caballo (<i>Solanum sisymbriifolium</i>)	Up to 2 leaves
Verdolaga (<i>Portulaca oleracea</i>)	Up to 2 leaves
Nabo (<i>Brassica campestris</i>)	Until rosette 10 cm
Nabón (<i>Raphanus sativus</i>)	Until rosette 10 cm

GRASSES

Capín arroz (<i>Echinochloa crusgalli</i>)	Up to 3 leaves
Pasto colorado (<i>Echinochloa colonum</i>)	Up to 3 leaves
Pasto cuaresma (<i>Digitaria sanguinalis</i>)	Up to 3 leaves
Sorgo de alepo de semilla (<i>Sorghum halepense</i>)	Between 10 and 15 cm

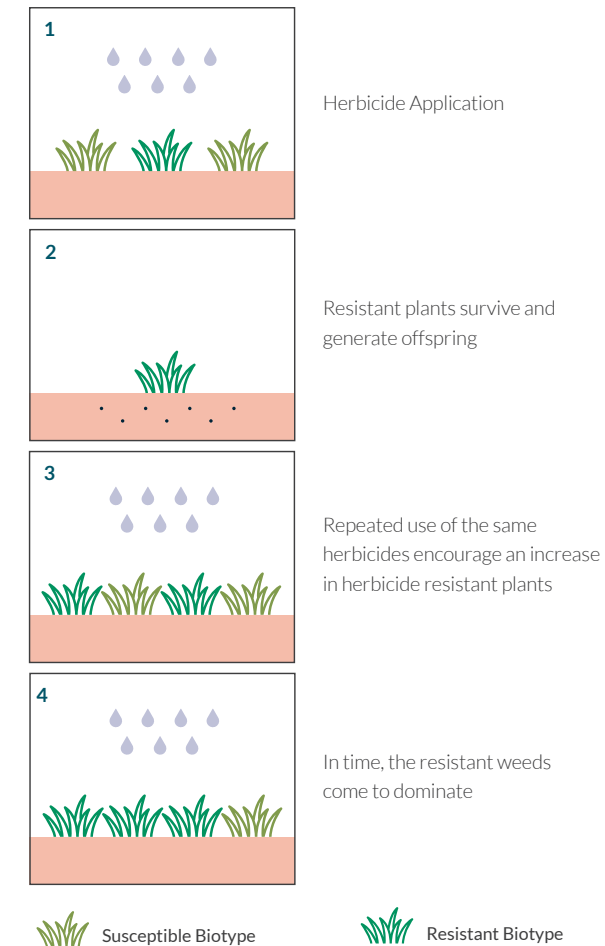
CYPERACEOUS

Cebollín (<i>Cyperus rotundus</i>)	Between 3 and 7 leaves
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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.



IMPORTANT CONSIDERTIONS

- 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.
- Apply with the dose indicated on the label and in the stages recommended on the product label.
- 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 deferral of plantings.
- 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, rye, wheat, corn, clover white odor, yellow clover, dactylis, bromus, fescue, annual ryegrass and perennial ryegrass.