

A new concept in
resistance management

focus 

Guardian of the productive system in the management of resistant weeds.

A Herbicide that is ahead of its time.



Terrad'or[®]



ourofino
agrocência

ourofinoagro.com.br
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Terrad'or: exclusive formulation ahead of its time.



Soybeans



Corn

The fundamental tool in the management of resistant weeds as horseweed, sourgrass among others. A herbicide ahead of its time, with broad spectrum, compatible to other herbicides and reducing losses of production on the field rapidly and efficiently.



Strategic Partnership Ourofino Agrociência, FarmHannong and ISK

Patented product ahead of its time, a result of the strategic partnership among the multinationals FarmHannong and ISK. This herbicide is composed of Tiafenacil Active Ingredient, with a mechanism that inhibits the action of PROTOX. The high quality of the formulation and its surfactants promote greater tolerance to rainfall after application and speed of control, resulting in excellent management of resistant weeds.



High investments in Research & Development

For years, tireless studies, evaluations, tests and applications have been carried out to define the technical positioning directed to the needs of Brazilian agriculture. All this, following the purpose and value of the company, which seeks to propose different strategies for the management of resistant weeds.



Researchers and Doctors involved in the development

The work was carried out in the main universities, official institutes, foundations and high-tech research and development centers in the most varied agricultural regions of Brazil. Many experts and researchers were part of the process, the great majority being doctors with broad experience. Among them are: Edivaldo Velini, Caio Carbonari, Rubem Oliveira Jr., Jamil Constantin, Roberto Toledo, Edson Mattos, Marcelo Malardo and Diego Alonso.



Proved Efficiency

In partnership with different institutions, numerous field studies have been carried out in the main agricultural regions of the country, with statistical evidence that proves the high performance of Terrad'or in the management of horseweed, sourgrass and other resistant weeds.



Features

- **Broad spectrum of control of weeds**
- **Fast absorption**
- **Good compatibility with other products**
- **Versatility**
- **Proved Efficiency**



Benefits

- Excellent performance in the control of control of resistant weeds, as sourgrass, goose grass, horseweed and others in the pre planting management of soy and corn.
- Excellent speed of control.
- Tolerance to rains after application.
- Safety in the application in association with glyphosate, glufosinate, graminicides and hormonal herbicides resulting in excellent performance.
- Flexibility and Control of weeds in different stages.
- Management of resistant weeds.

TECHNICAL INFORMATION

Systemic Action selective herbicide

Active Ingredient: tiafenacil

Concentration: 339 g i.a. L⁻¹

Chemical Group: Uracila

• **Mechanism of action (MoA):**

PROTOX inhibitor (Group E)

• **Formulation:** Concentrated Suspension (CS)

• **Packaging:** 5 and 20 L

PHYSICAL-CHEMICAL FEATURES

tiafenacil

Solubility in water (S_w): 110 mg.L⁻¹ (20° C) - moderate

Vapor pressure (P_v): 1,11 x 10⁻¹⁰ mmHg - non volatile

K_{oc}: 223,4 mL.g⁻¹ - medium mobility / moderate

Adsorption/Sorption: weakly adsorbed to soil

Log K_{ow}: 1,95 - Lipophilic

pKa: 10,4

Half life: less than 6 hours (humidity, T and pH) - non persistent

How does Terrad'or work?

Patented product ahead of its time, a result of the strategic partnership among the multinationals FarmHannong and ISK. This herbicide is composed of tiafenacil active ingredient, with a mechanism that inhibits the action of PROTOX. The high quality of the formulation and its surfactants promote greater tolerance to rainfall after application and speed of control, resulting in excellent management of resistant weeds.



1. Penetration and absorption

Terrad'or is absorbed by leaves and by other aerial parts.

2. Absorption and translocation:

After the absorption by leaves and by other aerial parts, the product translocates fast in the plant.

3. Mechanism of action:

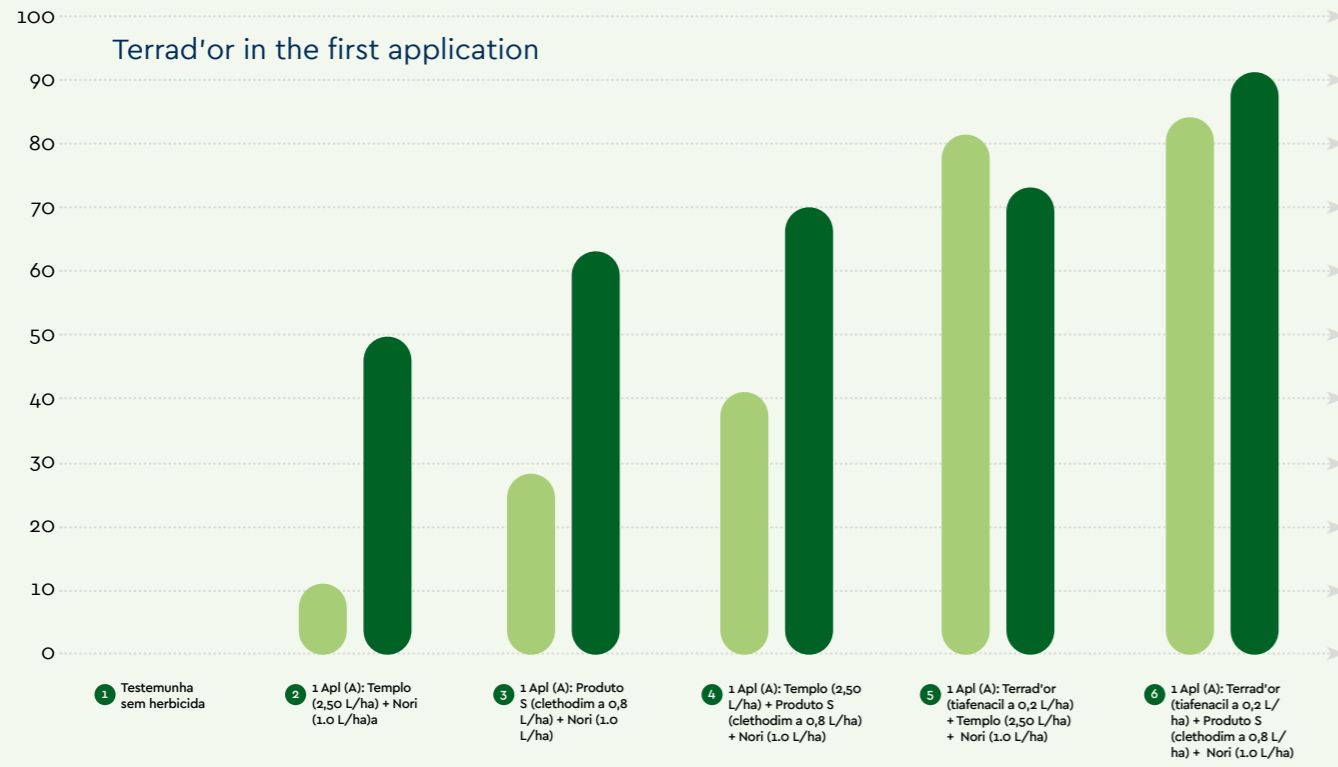
After reaching leaves and other aerial parts, Terrad'or is rapidly absorbed by the plant and starts to operate inhibiting PROTOX. With the inhibition of this enzyme, the accumulation of protoporphyrinogen occurs, which diffuses to the place where a non-enzymatic oxidation takes place. In this case, the interaction between oxygen and light occurs, causing lipid peroxidation in cell membranes, resulting in the death of the plant.



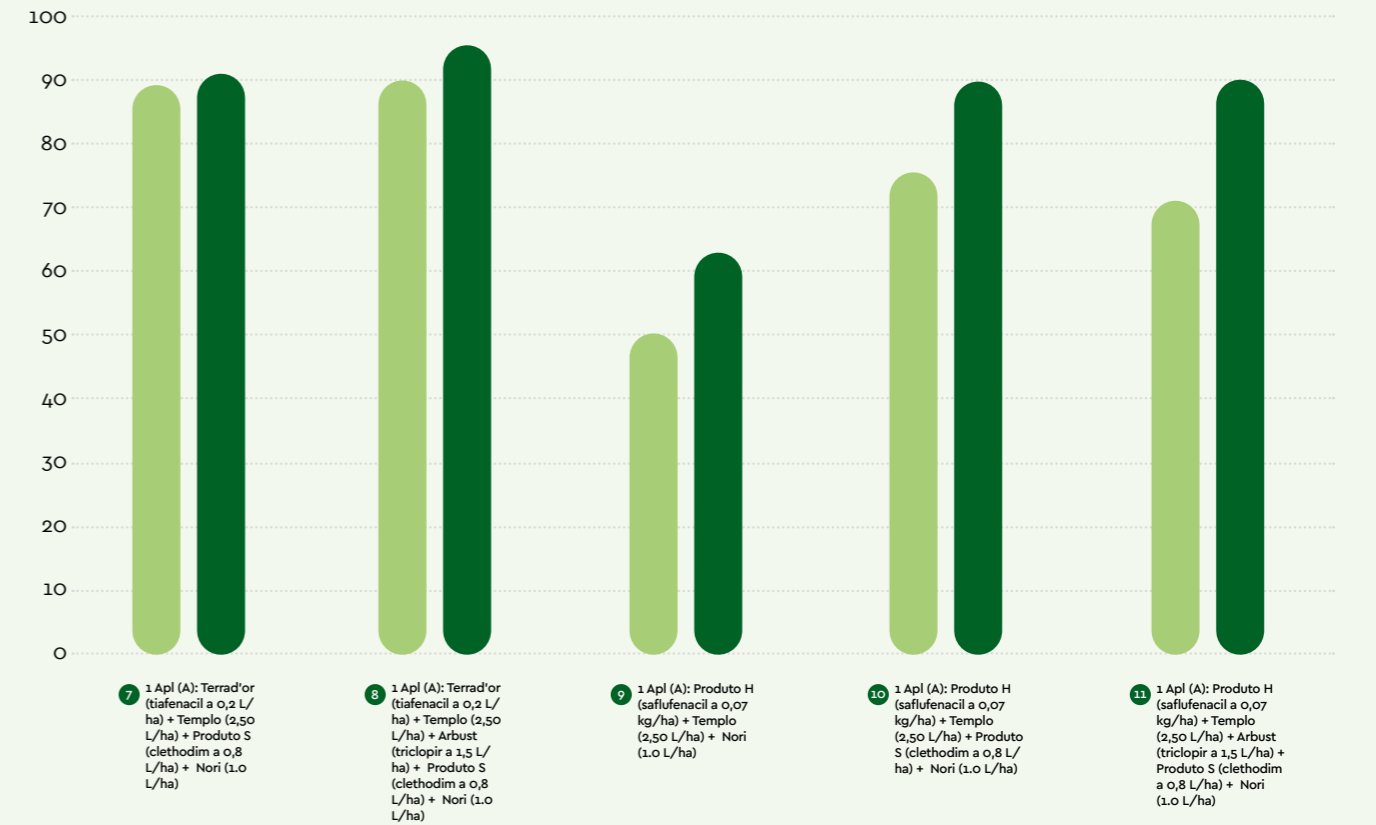
Use your QR Code reader and get to know more about the herbicide Terrad'or.

Results

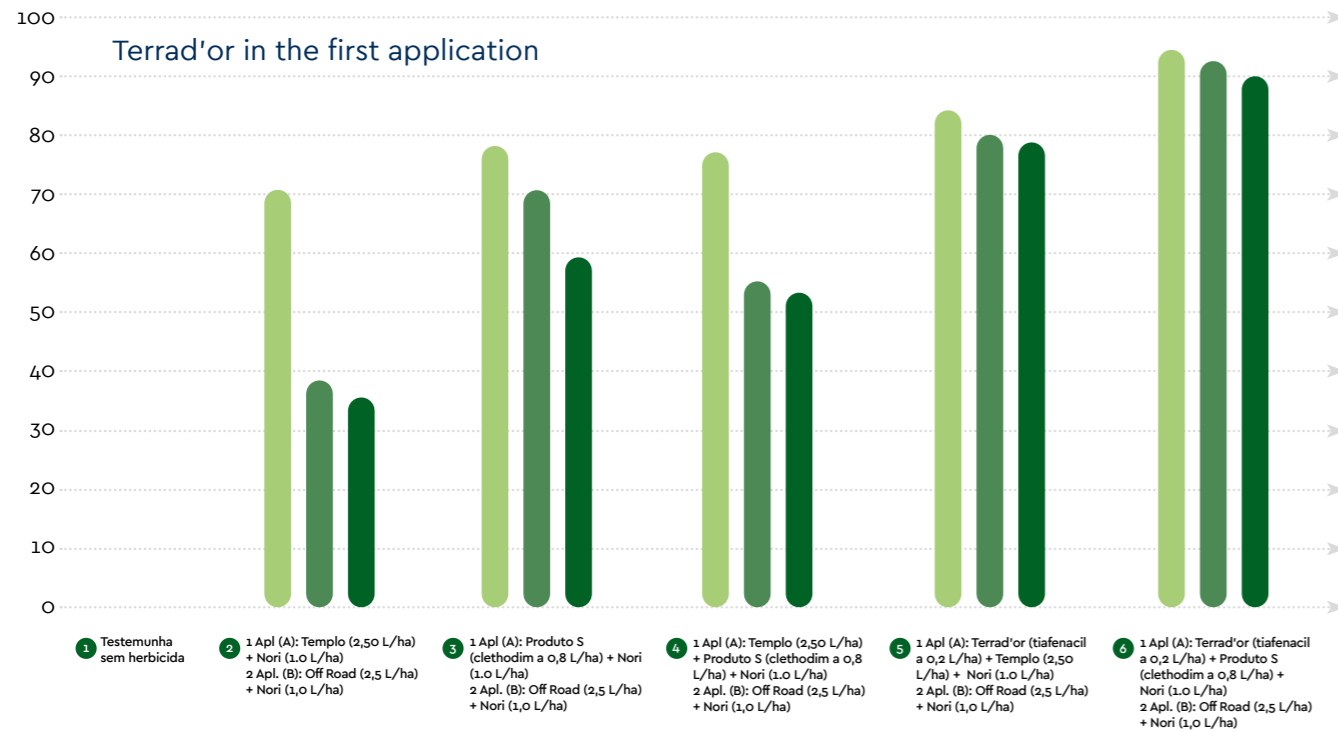
Pre-planting of soybeans management and the reflex of 1st application of herbicides in the control (%) sourgrass (*Digitaria insularis*) resistant to glyphosate. Mandaguçu, PR. Source: CONPEA – Constantin et al., 2021.



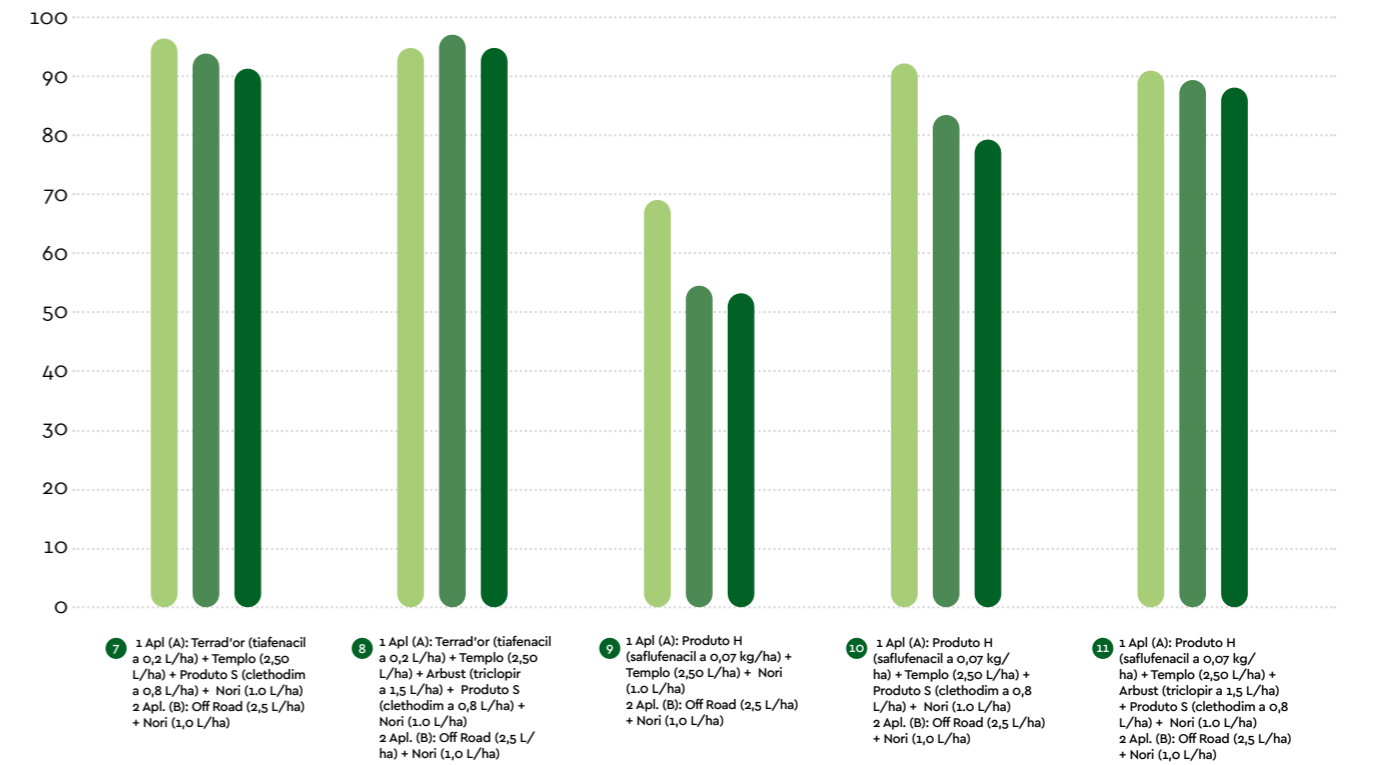
Sourgrass stage: tiller to pre-flowering (9 plants/m²)



Pre-planting of soybeans management and the reflex of 2nd application of herbicides in the control (%) sourgrass (*Digitaria insularis*) resistant to glyphosate. Mandaguçu, PR. Source: CONPEA – Constantin et al., 2021.

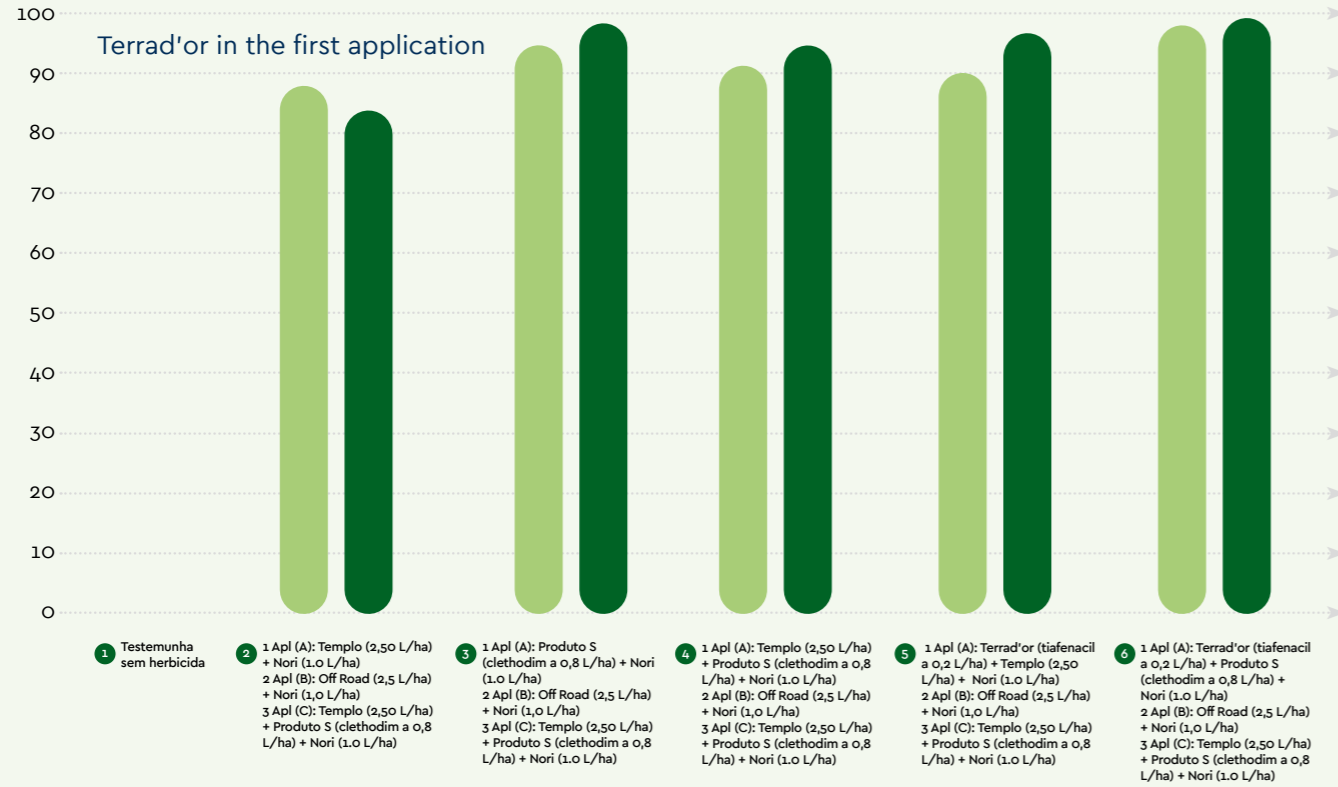


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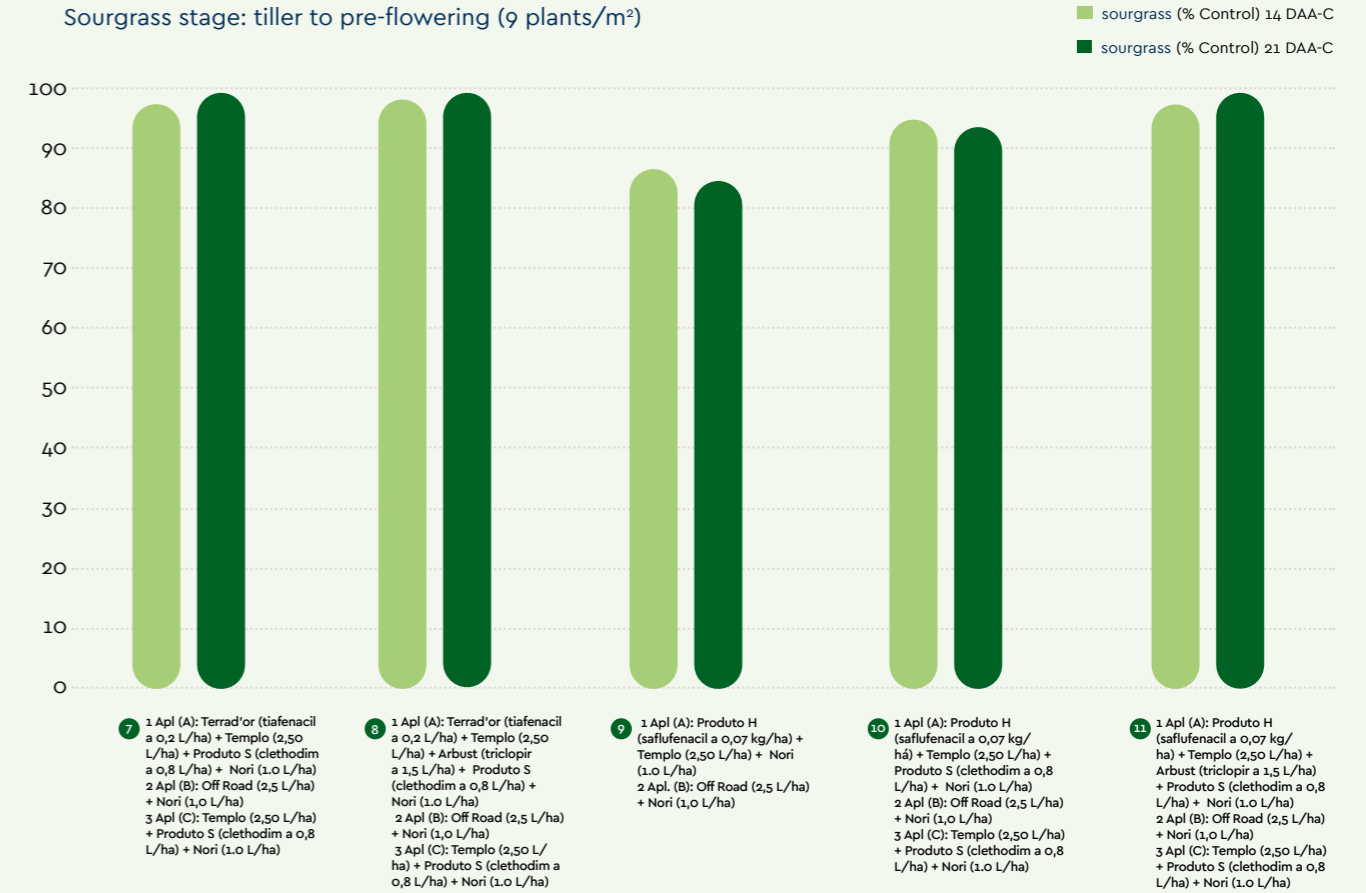


Results

Pre-planting of soybeans management and the reflex of 3rd application of herbicides in the control (%) sourgrass (*Digitaria insularis*) resistant to glyphosate. Mandaguaçu, PR. Source: CONPEA – Constantin et al., 2021.

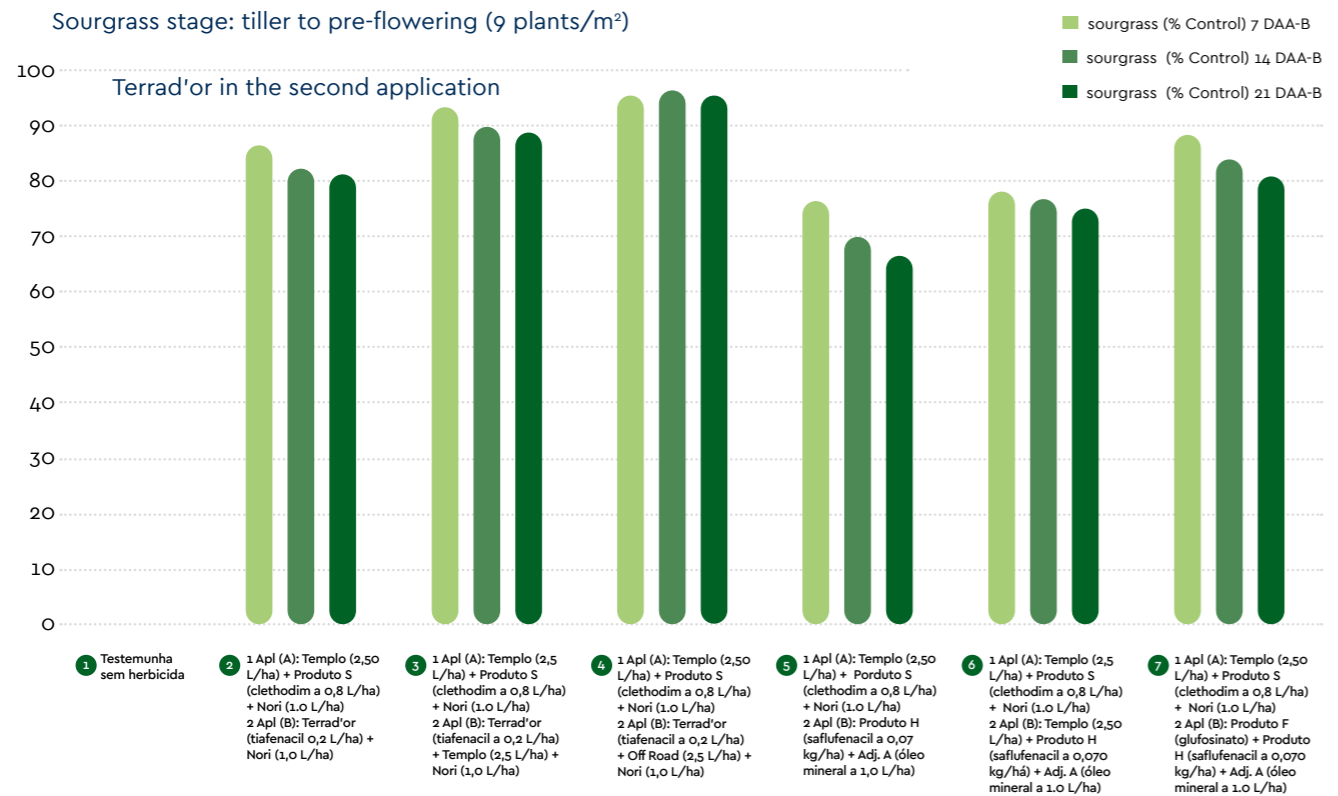


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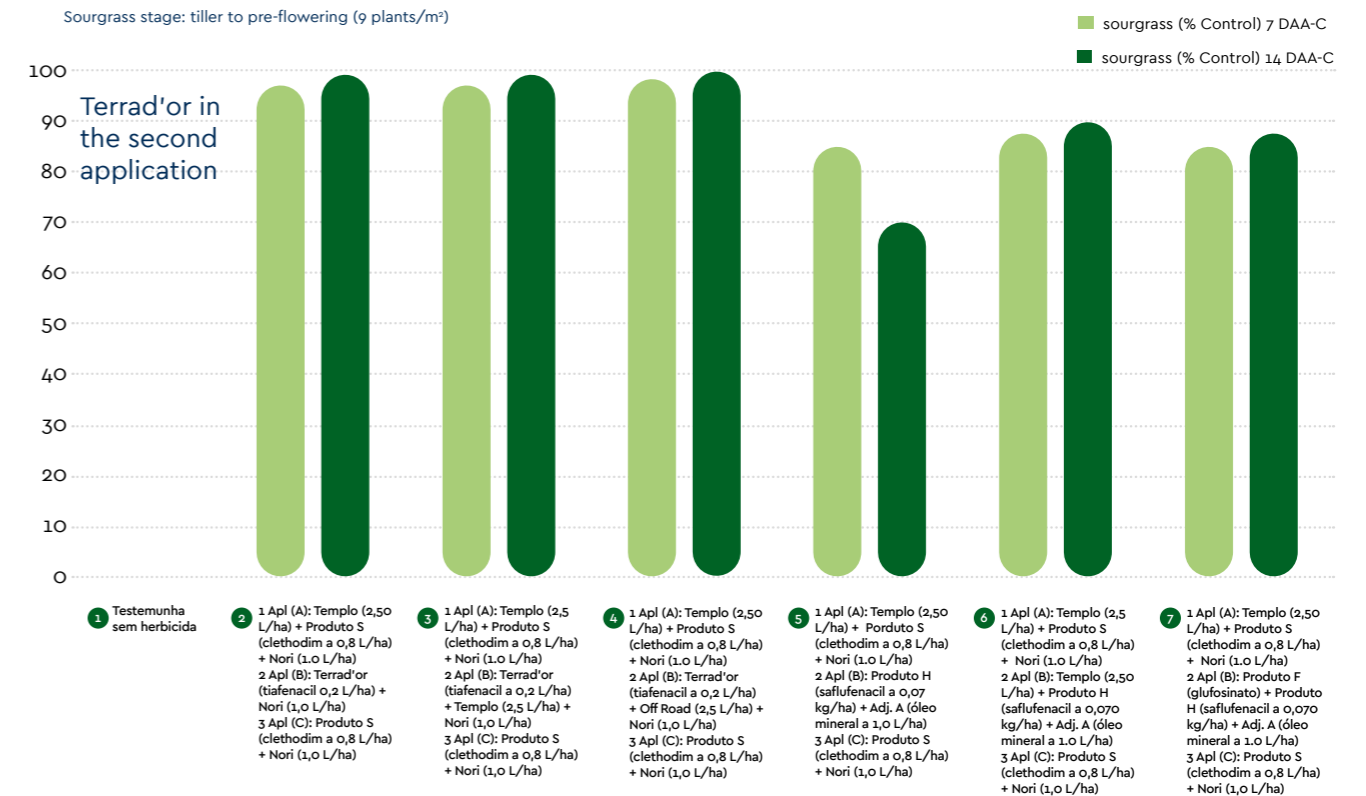
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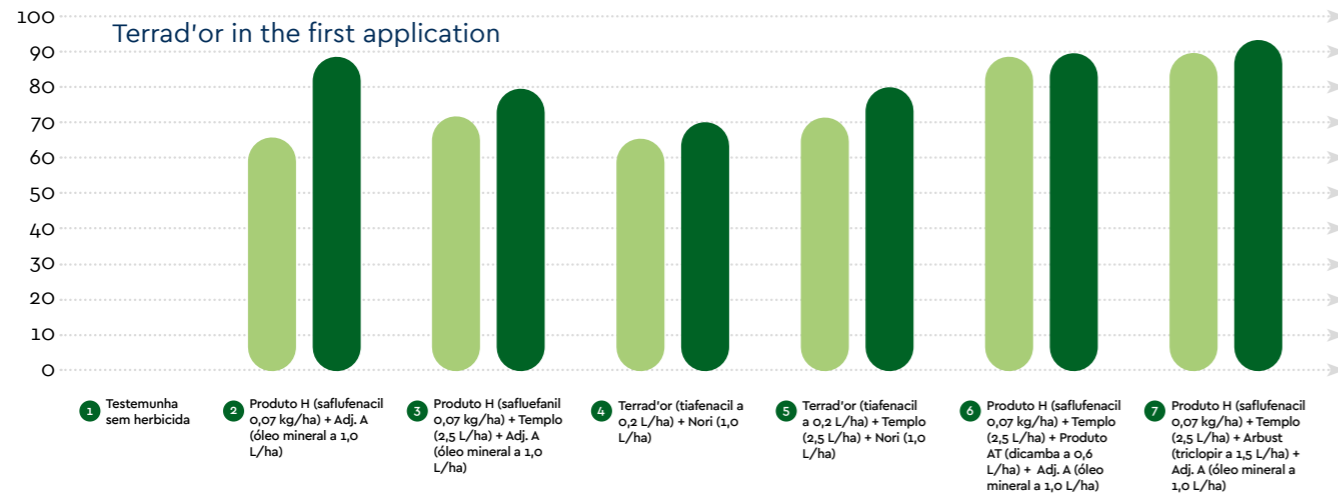
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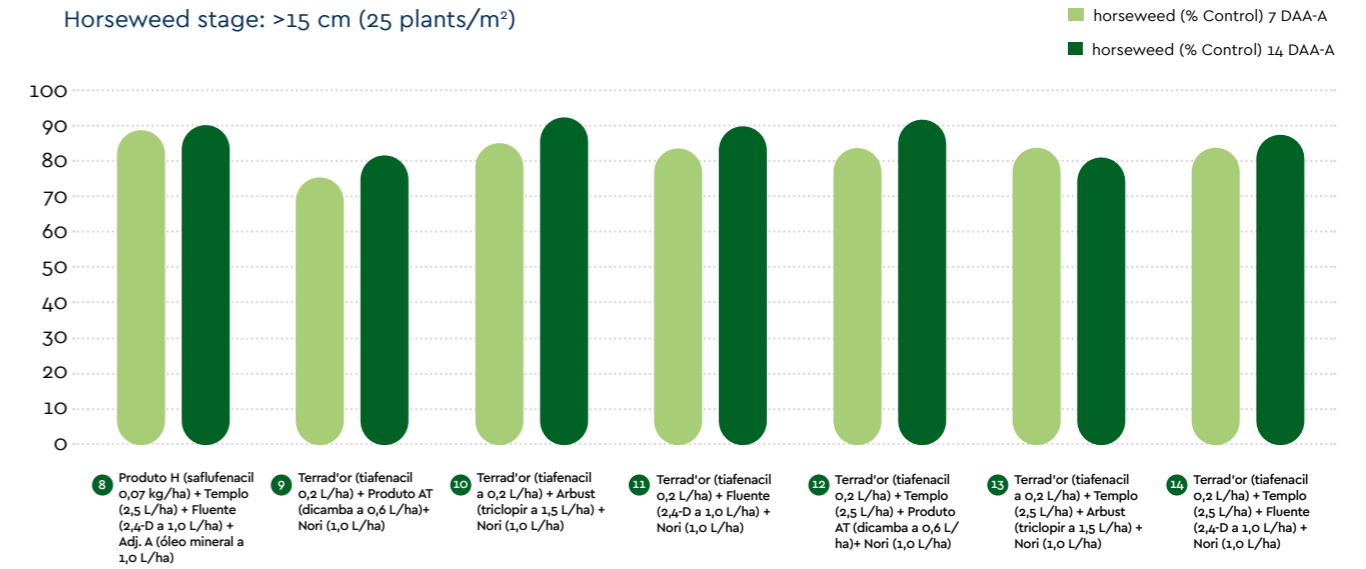


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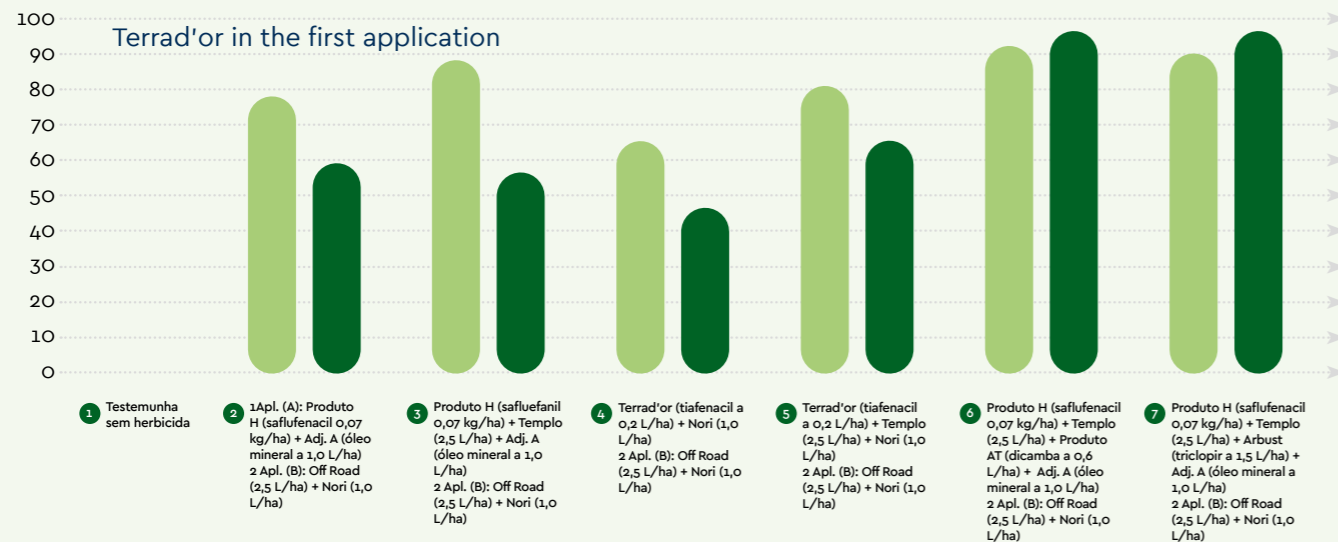
Pre-planting of soybeans management and the reflex of 1st application of herbicides in the control (%) of horseweed (*Conyza sp.*) resistant to glyphosate. Mandaguaçu, PR. Source: CONPEA – Constantin et al., 2021.



Horseweed stage: >15 cm (25 plants/m²)



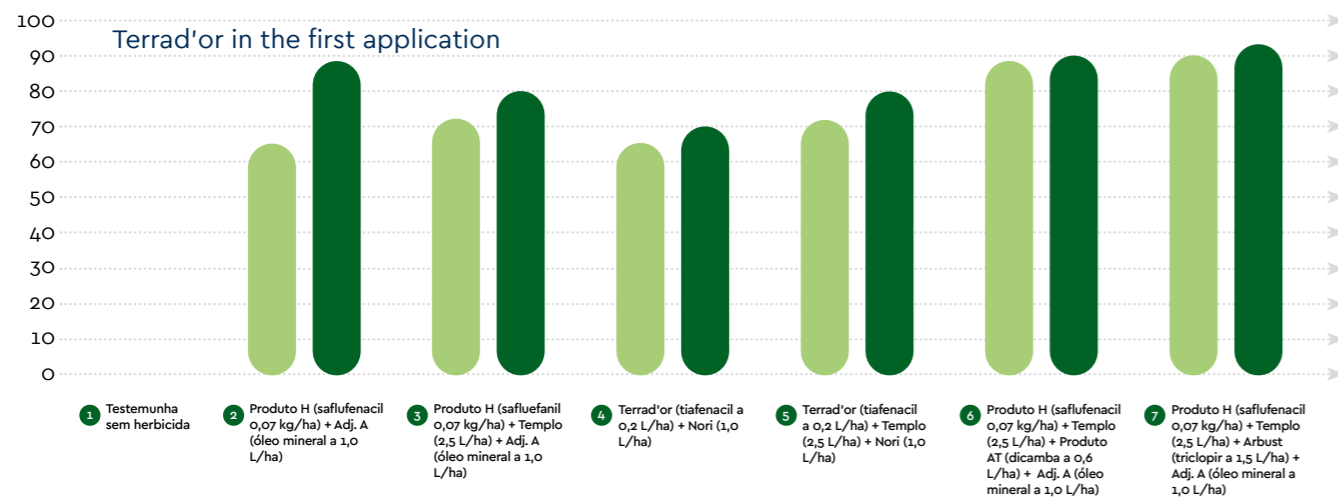
Pre-planting of soybeans management and the reflex of 2 sequential applications of herbicides in the control (%) of horseweed (*Conyza sp.*) resistant to glyphosate. Mandaguaçu, PR. Fonte: CONPEA – Constantin et al., 2021.



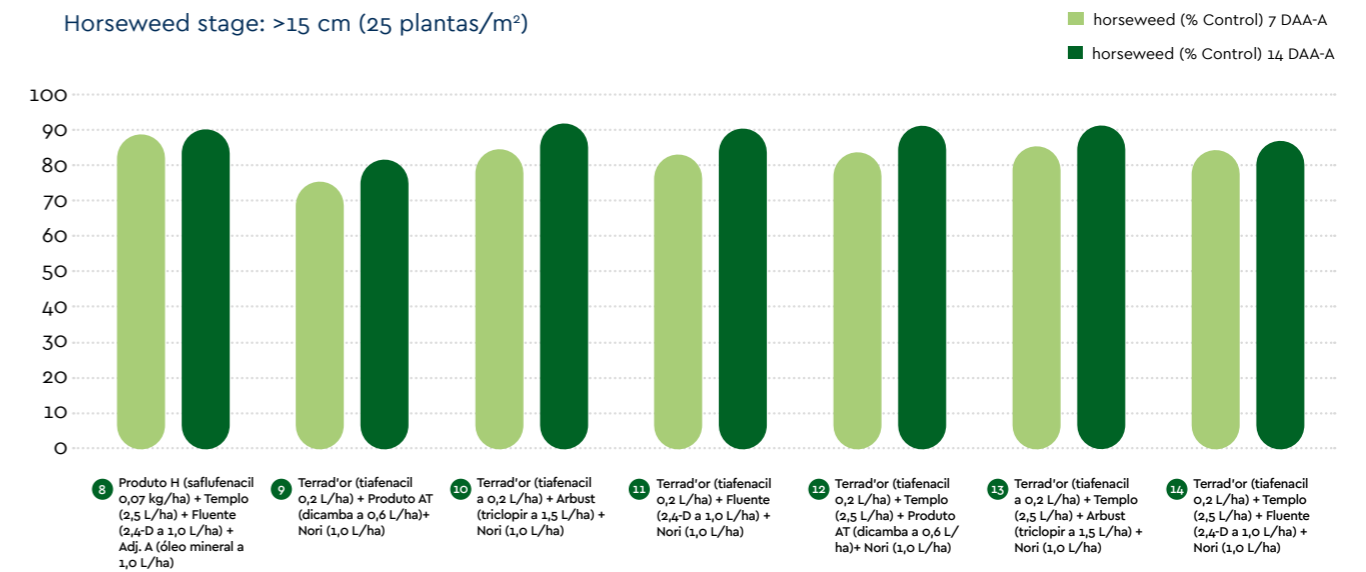
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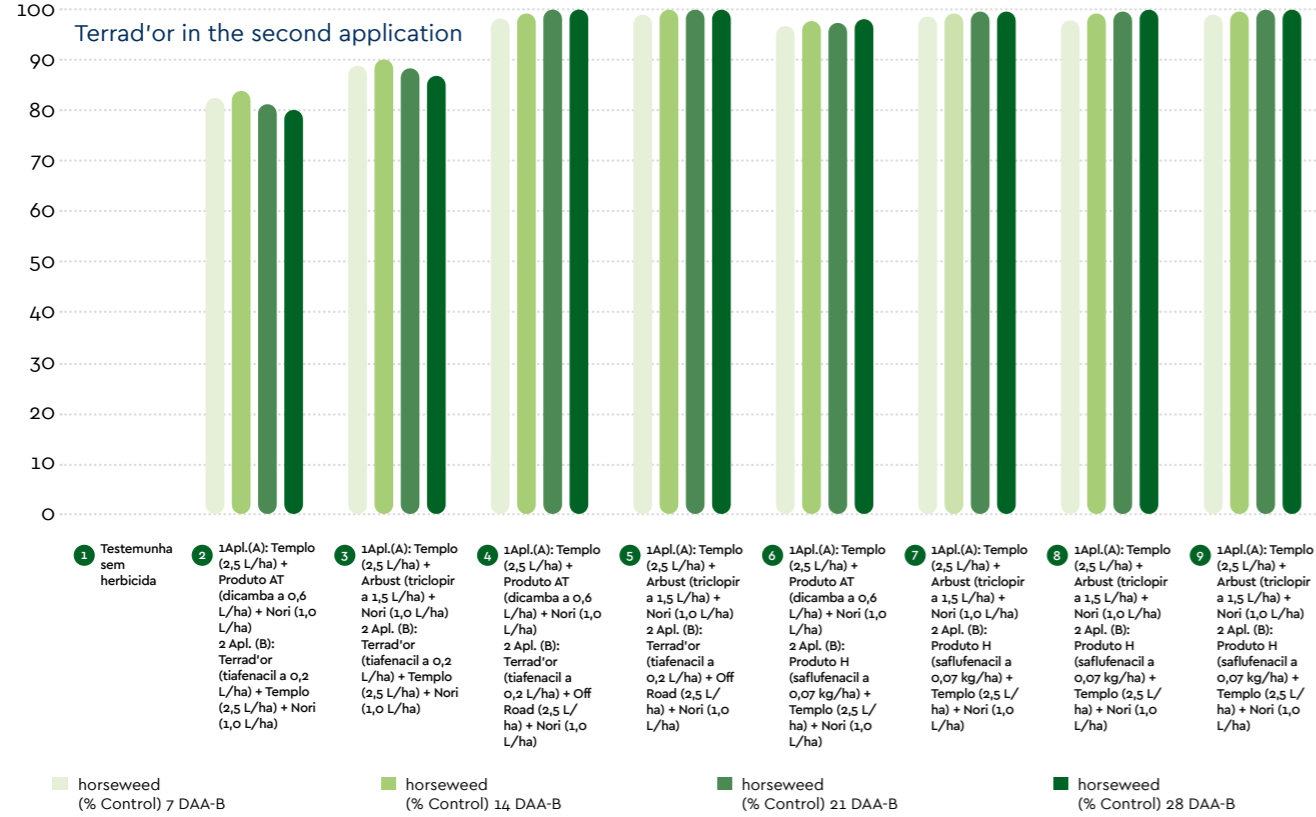
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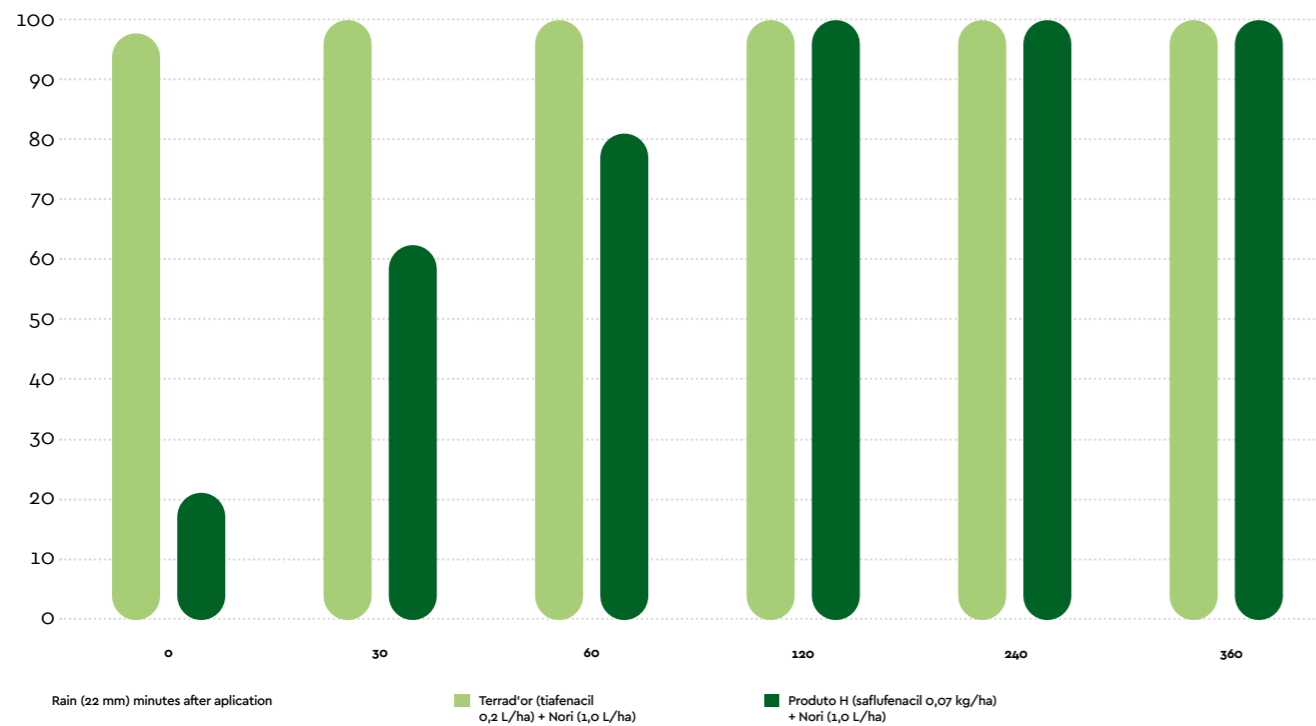
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Horseweed stage: >15 cm (23 plants/m²)



Influence of rain (mm) after application in the control technique (%) of morning glory (*Ipomoea grandifolia*). Source: OFA Ceagro – Mattos et al., 2022.



Technical positioning

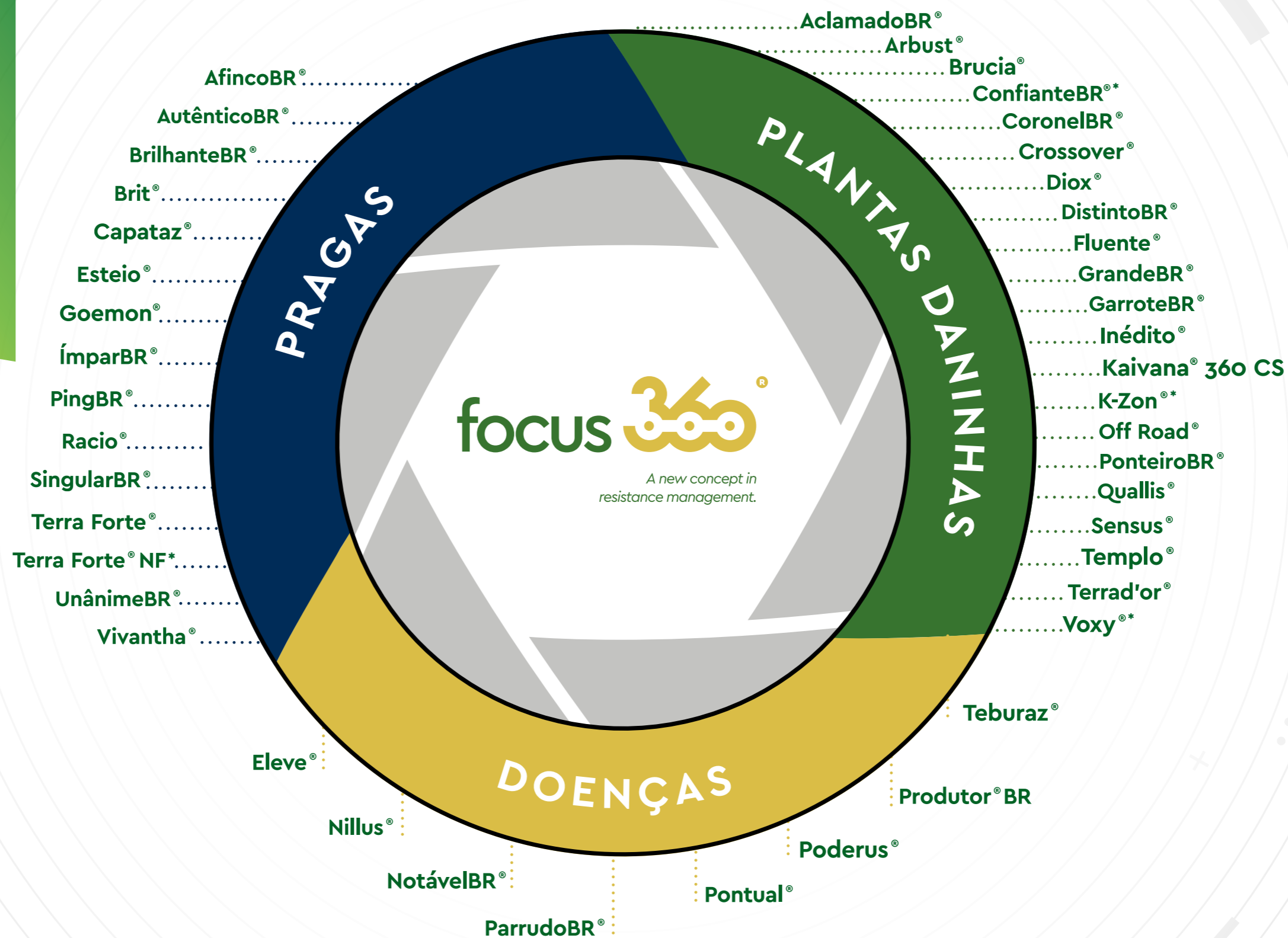
Management of resistant weeds in soybean pre-planting



Management of resistant weeds in corn pre-planting



Terrad'or
is a patented
herbicide that
integrates the
program
Focus 360.



Adjuvant: **Nori**®
Growth regulator: **Trix**®

*Products in the final registration phase.

THESE PRODUCTS ARE ONLY REGISTERED IN BRAZIL.

PRODUCTS BASED ON FIPRONIL AND IMIDACLOPRID ARE TOXIC TO BEES. AERIAL APPLICATION IS NOT ALLOWED. DO NOT APPLY THIS PRODUCT IN FLOWERING SEASON, IMMEDIATELY BEFORE FLOWERING OR WHEN BEE VISITATION IS OBSERVED IN THE CROPS. BREACH OF THESE DETERMINATIONS IS AN ENVIRONMENTAL CRIME, SUBJECT TO PENALTIES. IBAMA COMMUNICATION, OFFICIAL GAZETTE, SECTION 3, PAGE 112 FROM 19/07/2012.

STATE RESTRICTION: SEE PRODUCTS LEAFLETS.

ATTENTION!

THESE PRODUCTS ARE DANGEROUS TO ENVIRONMENT, HUMAN AND ANIMAL HEALTH. READ AND FOLLOW THE INSTRUCTIONS CONTAINED ON LABELS, LEAFLETS AND PRESCRIPTIONS. ALWAYS USE INDIVIDUAL PROTECTION EQUIPMENT. INFORM YOURSELF AND PERFORM INTEGRATED MANAGEMENT OF PESTS, RESISTANCE TO DISEASES AND WEED. **ALWAYS CONSULT AN AGRONOMIC ENGINEER. SALES UNDER AGRONOMIC PRESCRIPTION.**


DISPOSE OF PACKAGING AND PRODUCT RESIDUE CORRECTLY.

Ativo

Ourofino Integrated Service

Our customer service channel, strengthening the relationship with the countryside.

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