



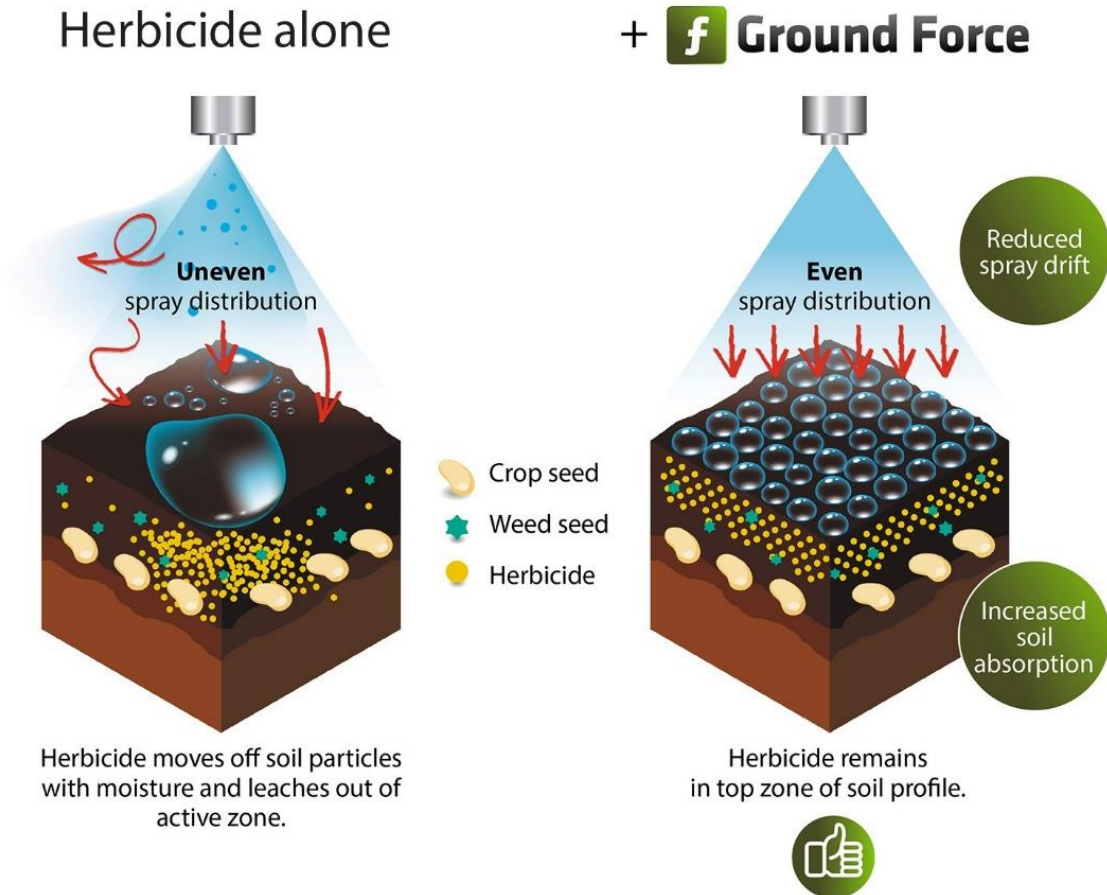
“A Positive Environmental Impact Product”

Soil Conditioner Adjuvant For Use With Residual Soil Applied
Herbicides And Pre-Emergence Herbicides

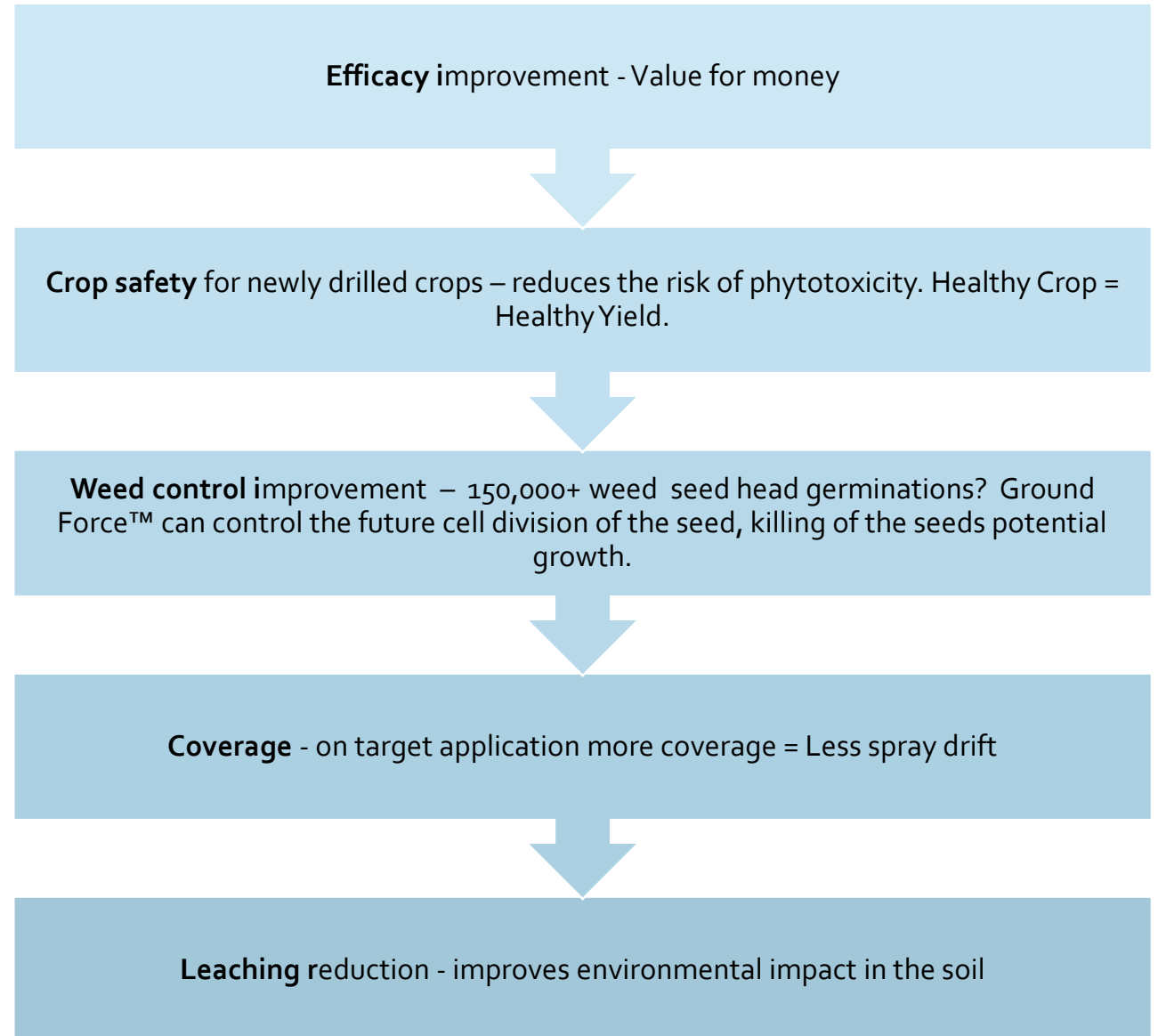


What is Ground Force™?

- Ground Force™ is a combination of paraffinic hydrocarbons, non-ionic surfactants, specialist food grade oils and modern sticking agents.
- Formulated for use with all soil-residual and pre-emergence herbicides.
- On target weed control



Key Benefits



Soil Types

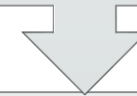


- Ground Force™ can be used on a variety of soil types where a pre and post emergent application is suitable.
- Ground Force™ is most effective on moist soils.
- Effective on light sandy soils where leaching might be a problem.

On Soil Mode Of Action

Pre-em
herbicides
efficacy and level
of weed control
is directly linked
to efficient
application.

Ground Force™ reduces spray drift and gives improved deposition and coverage on to the soil.



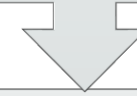
It gets the herbicide into the soil quickly so reduces chance for photodegradation.



Once in the soil, the long chain oil-based chemistry in Ground Force™ helps to bind the herbicide in the top layer of the soil.



This keeps the herbicide in the same area as the weed seeds and prevents it from moving deeper to where the crop seeds are planted.



This reduces the potential for phytotoxicity to the crop seeds and maximises effect on the weeds.

Mode of action

Embeds the herbicide in the top 5cm of the soil layer, Ground Force™ comes into action where the majority of weeds germinate, increases efficacy with maximum active herbicide and Ground Force.



Working Benefits

As herbicides continue to get withdrawn from the EU market making the existing ones work more efficiently is crucial for the farming communities. Add an adjuvant to your existing weed control program will benefit in **harvesting gains**.

Thinking **smart** by adding Ground Force™ **adjuvant** to Pre & Post Emergent Herbicides improves weed control effectively, saving time and money.

Grasses such as Blackgrass in northern Europe and Ryegrass & other grasses around the world, are **now becoming resistant** and difficult to manage with standard weed control methods.

Ground Force™ active ingredient has improved the control of grasses by circa 8-10%. Achieving **viable yields** for the farmer.

Pre emergence herbicides are much cheaper than post emergent herbicides but are notorious for their variable performance when they can fail or work inadequately. Adding **Ground Force™** Adjuvant solves this!

Ground Force™ Application Rate

Pre emergent herbicides are most effective when adequate moisture is in the soil

Autumn/Winter Application

- Recommended to spray lower rate of Ground Force™ product to remain active over the moist winter months.
- **0.2 L/Hectare**

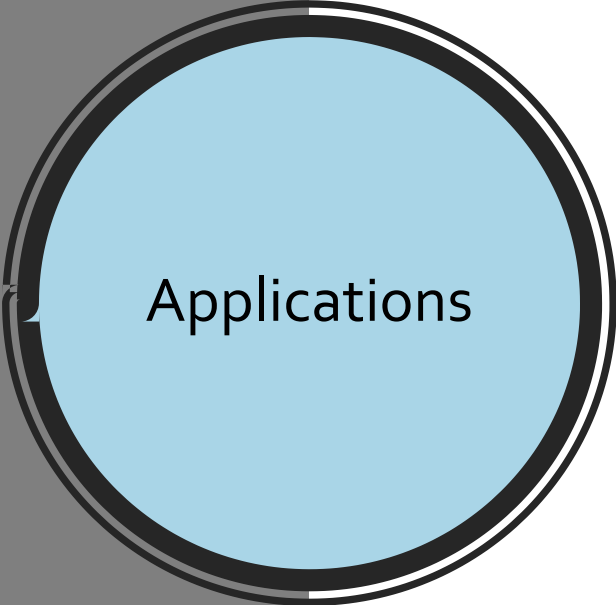
Spring/Summer Application

- Recommended to spray higher rate of Ground Force™ product in spring where conditions are likely to be dryer, or rainfall is not expected shortly after application.
- **0.3 – 0.4 L/Hectare**

- Ground Force™ must be used as a pre-emergent application applied in a tank mix with the pre or post emergent herbicide.
- Consult with your local agronomist when mixing with other herbicides and pesticides ensuring that all statutory conditions are adhered to.
- Ground Force™ adjuvant may be used at a maximum concentration 1.0% V/V spray solution
- Ground Force™ rates are not affected by spray water volumes.
- Recommended to use with a coarse/medium spray nozzle for even distribution of spray droplets and coverage to the target area. Environmental impact with less spray drift.



Examples of Crops	
Sunflower	Soya
Winter /spring cereals	Maize
Oilseed rape	Peas
Linseed	Beans
Potatoes	Sugar beet
Vegetables	Tree and Vine Fruits



Applications

Examples of typical herbicides for use with Ground Force™ and other approved pre emergent actives for specific crops.

Acetochlor

Clomazone

Diflufenican

Flufenacet

Imazamox

Linuron

Metazachlor

Metribuzin

Pendimethalin

Prosulfocarb

Promethrin

Quinmerac

Tri-allate

Stage of application



Timing – Earliest and Latest

For maximum number of treatments and latest time of application, always follow the statutory conditions of use of the pesticide:

- Ground Force™ can be applied to all recommended crops immediately after sowing or early stages of growth.
- Ground Force™ is authorised for use with all approved Herbicides at full rate up to and including the growth stage specified, on the label* and at half the approved rate thereafter. **

*Please refer to chart on next page

**All restrictions of use of Pesticide labels must be followed. All plant protection products must be used in accordance to the manufactures registered label.

Growth Rate Guidance Application

FRUITS	
Apple and Pear	Up to and including fruit 5-10mm
Cherry and Plum	Up to and including first fruit set
Almond, Apricot, Peach and Nectarine	Up to and including first fruit set
Table Grapes and Wine Grapes	Up to and including first fruit set
Strawberry	Up to and including first fruit development
Raspberry	Up to and including first fruit set
Blackcurrant and Redcurrant	Up to and including first visible green fruitlet
Cucumber	Up to and including first fruit set
Tomato	Up to and including first fruit set on first truss
Aubergine Melon, Pepper and Chilli, Winter Squash Pumpkin	Up to and including first fruit set



CROPS	
Oilseed rape	Up to and including 10% potential pods
Linseed	Up to and including 10% capsules formed
Sugar beet	Up to and including 6 fully expanded leaves
Hops	Up to and including cone set
Cereals	Up to and including GS52 (1/4 inflorescence)
Forage Maize	Up to and including tip of tassel visible

VEGETABLES	
Broad bean- Fresh, Dwarf French bean, Field bean, Runner bean	Up to including first pod set
Combining Pea and vining pea	Up to and including flat pod (non-edible pods only)
Edible podded pea	Up to and including pod set
Brussel sprouts	Up to and including lateral buds begin to develop
Potato	Up to and including tuber initiation
Cauliflower	Up to and including cauliflower heads begin to form; width of growing tip up to 1cm ²
Lettuce	Varieties forming heads: up to and including head begin to form
Lettuce	Varieties not forming heads: up to and including leaf rosette has reached 30% of the diameter typical for the variety
Carrot, Parsnip, Turnip	Up to and including 9 true leaves unfolded
Bulb Onion	Up to and including 9 leaves clearly visible
Spinach	Leaf rosette has reached 30% of the expected diameter typical for the variety
Broccoli/Calabrese	Up to and including heads begin to form; width of growing tip up to > 1cm ²
Red beet	Up to and including six fully expanded leaves. Does not include beetroot grown for salad leaf use.

All plant protection products must be used in accordance to the manufactures registered label

Product
Usage
Information

Ground Force™ can be used with Pre-Emergence Herbicide and Post-Emergent Herbicides.

Usage Calculator				
	Based on 3 Litre	Dilute Rate/Ha	Dilute Rate/Ha	Dilute Rate/Ha
Pallets	ltr / Plt	0.2	0.3	0.4
1	600	3000	2000	1500
2	1200	6000	4000	3000
3	1800	9000	6000	4500
5	3000	15000	10000	7500
10	6000	30000	20000	15000

Ground Force™ Labels

A0890



Ground Force is a specialist adjuvant oil formulated to be applied with residual soil applied herbicides. It is an emulsifiable concentrate formulation containing 725 g/L oil (petroleum oils) (EAC 1), formulated with emulsifying agents and sticking agents.

KEY BENEFITS:

- Providing maximum efficiency of residual herbicides even in adverse weather conditions.
- Improves coverage of treated surface by limiting fine spray droplets
- Moves herbicide quickly into the soil to prevent volatilisation or photo-degradation
- Fixes the herbicide in the top 5cm of the soil layer

Health & Safety Information

Wash hands thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective gloves/protective clothing/eye protection/face protection.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician.
Refer to manufacturer or supplier for information on recovery or recycling.

Safety Precautions

Operator Precautions
Engineering control of operator exposure must be used where reasonably practicable in addition to the following personal protective equipment
Wear suitable gloves/protective clothing/eye protection/face protection.
However, engineering controls may replace personal protective equipment if a CoSHH assessment shows they provide an equal or higher standard of protection.

When using do not eat, drink or smoke. Do not get in eyes, on skin, or on clothing. Do not breathe spray. Wash all protective clothing thoroughly after use, especially the inside of gloves. Take off immediately all contaminated clothing.
IF exposed or if you feel unwell: Call a POISON CENTER/doctor
Environmental Protection
Do not contaminate surface waters or ditches with chemical or used container. Avoid release to the environment. Refer to special instructions.
Storage & Disposal
Keep locked up and out of reach of children.
Dispose of contents and container in accordance with national legislation on waste disposal. Refer to manufacturer/supplier for information on recovery/recycling. To maintain quality, store at ambient temperatures and prevent from freezing. Protect from direct sunlight and heat.

Packed in 4 x 3L

3L^e



Directions for use

Autumn / Winter use Use 200 ml / Hectare
Spring / Summer Use Increase use to 300 - 400 ml / Hectare

Rates are not affected by spray water volume

Use with residual herbicides such as: Metribuzin, Clomazone, Pendimethalin, Promethrin, Quinmerac, Acetochlor, Imazamox, Diflufenican, Flufenacet, Linuron, Prosoflocarb and others

Target Crops: Winter and spring cereals, beans, linseed, maize/corn, oilseed rape, sunflower, soybeans, peas, potatoes, sugar beet, vegetable crops.

Timing: can be applied to all crops immediately after sowing or early stages of growth (see table to the right)

Target soil: can be used on all soil types

Field of use: FOR USE ONLY AS AN ADJUVANT OIL

Ground Force can be used in the following situations with the following restrictions.

For maximum number of treatments and latest time of application, always follow the statutory conditions of use of the pesticide:

Crops/situations:	Plant protection product:	Maximum concentration (% spray solution):
All edible crops	All authorised plant protection products at half or less than half the authorised plant protection product rate	1.0 % V/V
All non-edible crops	All authorised plant protection products	1.0 % V/V
Non-crop production	All authorised plant protection products	1.0 % V/V

READ THE LABEL BEFORE USE. USING THIS PRODUCT IN A MANNER THAT IS INCONSISTENT WITH THE LABEL MAY BE AN OFFENCE. FOLLOW THE CODE OF PRACTICE FOR USING PLANT PROTECTION PRODUCTS.
ADJ A0890

MIXING AND SPRAYING

Before use ensure that all spraying equipment is clean. Add half the required volume of water and start agitation, add the required quantity of **Ground Force**. Fill the tank to the required volume whilst maintaining agitation. Continuous agitation must be maintained until spraying is complete. All application equipment must be thoroughly cleaned with water prior to storage or use on another crop.

CONDITIONS OF SUPPLY

Our products are high grade and we believe them suitable for use as directed, but as we cannot control their mixing, use or weather conditions during and after application, no condition or warranty is made as to their quality or fitness and no responsibility will be accepted for damage or injury arising either directly from their storage, handling or use. No liability shall be accepted for any loss or damage caused due to any person failing to use the product in accordance with the instructions for use.



Global Adjuvants Company Ltd
20-22 Wenlock Road,
London, N1 7GU, UK

In addition, **this adjuvant** may be used at a maximum concentration of **1.0 % V/V spray solution** on the following crops, **up to the growth stages specified**, with all approved plant protection products applied up to their full approved rate.

After the crop has reached the growth stage, the rate of approved plant protection product must be no more than half the full approved rate.

Apple and pear	up to and including fruit 5-10 mm	Forage Maize	up to and including tip of tassel visible
Cherry and plum	up to and including first fruit set	Brussels sprout	up to and including lateral buds begin to develop
Almond, apricot, peach and nectarine	up to and including first fruit set	Potato	up to and including tuber initiation
Table Grapes and Wine Grapes	up to and including first fruit set	Cauliflower	up to and including cauliflower heads begin to form; width of growing tip up to 1 cm ²
Strawberry	up to and including first fruit development	Lettuce	varieties forming heads: up to and including heads begin to form
Raspberry	up to and including first fruit set	Lettuce	varieties not forming heads: up to and including leaf rosette has reached 30% of the diameter typical for the variety
Blackcurrant and redcurrant	up to and including first visible green fruitlet	Carrot, Parsnip, Turnip	up to and including 9 true leaves unfolded
Cucumber	up to and including first fruit set	Bulb Onion	up to and including 9 leaves clearly visible
Tomato	up to and including first fruit set on first truss	Spinach	leaf rosette has reached 30% of the expected diameter typical for the variety
Broad bean - Fresh, dwarf French bean, field bean, runner bean	up to and including first pod set	Broccoli / calabrese	up to and including heads begin to form; width of growing tip > 1 cm ²
Combining pea and vining pea	up to and including flat pod (non-edible pods only)	Red beet	up to and including six fully expanded leaves. Does not include beetroot grown for salad leaf use
Edible podded pea	up to and including pod set	Aubergine Melon, Pepper and Chilli, Winter Squash Pumpkin	up to and including first fruit set
Oilseed rape	up to and including 10% potential pods		
Linseed	up to and including 10% capsules formed		
Sugar beet	up to and including 6 fully expanded leaves		
Hops	up to and including cone set		
Cereals	up to and including GS52/1/4 inflorescence)		



Ground Force™ Trial Pictures - Untreated

- Trials conducted on corn / maize in Ukraine 2018. Light soil with heavy rain after application of Pre-Emergent herbicide
- Untreated field has clear herbicide damage

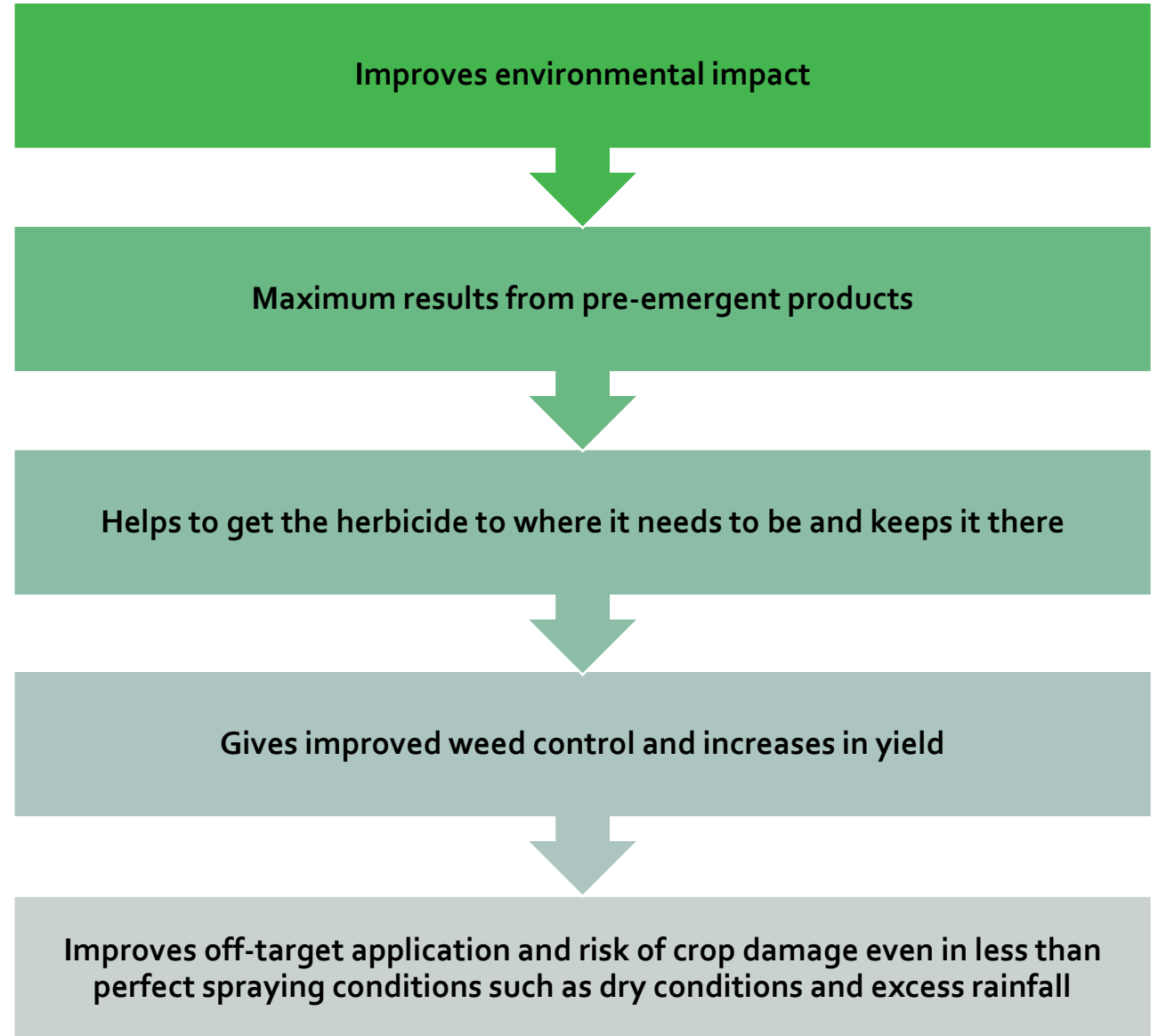


Ground Force™ Trial Pictures - Treated



- Treated field
Pendimethalin and
Ground Force™ shows no
damage.
- Ground Force™ has
prevented herbicide from
leeching down into crop
root zone.

Ground Force™ Summary



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Division of

