

XPOWER

ELECTRICAL WEED CONTROL

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zasso™



AGXTEND
Xpect more

THE FUTURE OF HERBICIDES IS THE XPOWER

- A new alternative weeding technique
- Electrophysical destruction of weeds and invasive plants
- Based on a closed, uniform and targeted electrical circuit
- Works down the roots: XPOWER treats the plant from the leaves to the roots in the soil

Chemical herbicides were a huge success story in the 20th century, reducing costs and raising yields. But there are now very good reasons why alternative weeding technologies are an important step forward, for many areas of application.

For example, different studies provide different results on how dangerous glyphosate is.

The true risk of glyphosate is controversial. The consumer's uncertainty is high.

Also, scientists learn more and more about the mechanism of biological resistance. We see how fast chemical resistance is advancing and spreading worldwide.

Whatever results the mixture of toxicological, regulatory and political evaluations will finally have: Non-chemical tools will be required to develop optimized applications for reliable, long-term strategies.

AGXTEND's new XPower uses high-electric power and electrophysical engineering to minimize chemical herbicides and eliminate undesirable plants effectively by electronic weeding.



WORKING PRINCIPLE

High-voltage electricity is provided locally by a generator. The electric current passes via the applicator into the plants and then into the soil. The electric circuit is closed via a second applicator that either touches other plants or the soil. The energy lets the plants wilt from the inside, right down into their roots:

- Chlorophyll is immediately damaged
- The cells are partially destroyed and die
- Interrupted water supply in the vessels
- Fast desiccation of plants
- Plants are not thermally destroyed, but in a systemic way

The right amount of energy and an optimized applicator are decisive for the effect. Plants with a high water content and with few stems and roots compared to their leaf mass require only little energy and are easy to treat.

Very dense and woody grasses or very large plants require a lot of energy and special applicators. In these cases, combination methods, for example with mowing achieve best results. Plants with larger rootstocks or rhizomes are severely weakened and will partially require more than one treatment.

The XPower effect can best be compared with that of Glyphosate, it works right down to the roots – only in an instant and without residue!
100% chemical free. 100% Eco-friendly.



XPOWER BENEFITS

APPLICATION SERVICE

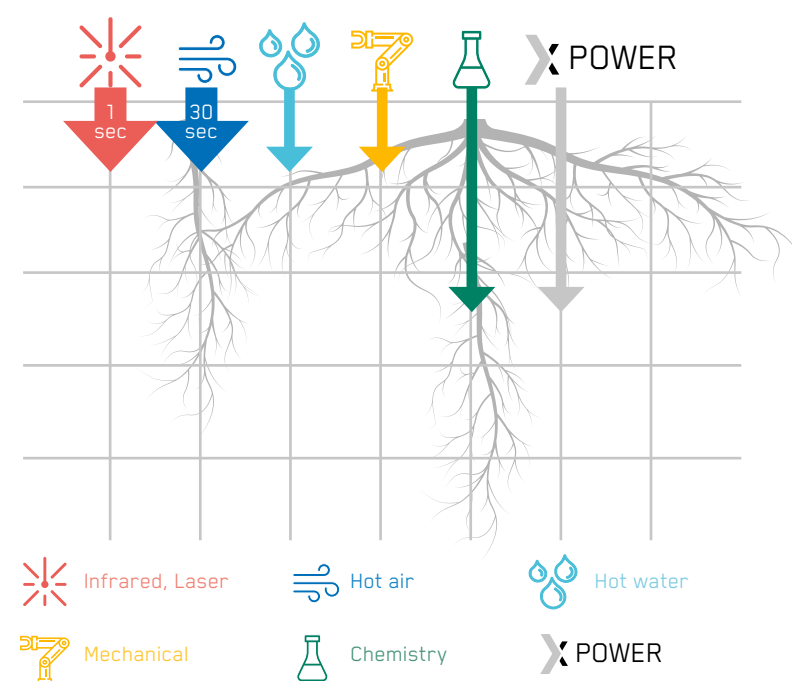
To optimize the treatment parameters including working speed, time & output power, AGXTEND will provide an application service that will support you in your application to achieve best results with minimum effort.

SAFE

The special design of the electric applicators, the protective covers and a range of other safety features ensure that all devices are safe to use.

WORKS DOWN THE ROOTS

Next to chemistry only XPower works systematically down to the roots. The electric power is directed through the roots into the soil. Therefore, the roots of any plants that come into direct contact with the applicator system are damaged. This minimizes all regrowth capacity from the roots, thus fighting perennial as well as annual weeds.



THE XPOWER EFFECT

The electrical energy is targeting and destroying the chlorophyll as well as the water and nutrient system right down into the roots. The green leaf pigment or chlorophyll is torn out of the photosynthetic process and then carries on destroying itself because it can no longer emit the absorbed light energy. The current itself causes cells to burst and cell sap to seep into the intercellular spaces. The plant's vascular bundles, its main arteries for water supply, are going to be destroyed beyond repair.

This way the plant is no longer able to survive after less than one second of treatment, making this method much faster than hoeing, where the weeds take hours to dry off on the soil surface – and in the worst case may even start to regrow.

Chemical herbicides such as Glyphosate take at least hours before they have safely penetrated the leaves and are no longer in danger of being washed off.

The warmer the weather, the faster the leaves will dry up. In temperatures above 25°C they already start to wilt after just a few minutes and the stems are starting to bend, because water supply runs out and cell pressure strongly decreases.

In humid, cool and overcast weather the darkening green colour of the filling-up intercellular spaces is noticeable after several minutes, while the yellowing may take several hours up to days and the final drying off more than one day.



XPOWER APPLICATIONS:

- Herbicides which are phased out now
- Potato desiccation
- No-Till application
- High value cultures
- Small, innovative cultures without own herbicide registration
- Resistant plant control programs
- Minimizing herbicides programs
- Avoiding of waiting times before seeding and harvest
- Height selective applications
- Need to avoid any soil movement (evaporation, irrigation, erosion, soil life, efficiency)
- Suitable for organic agriculture

ADVANTAGES:

- Rapid action
- Long-lasting effects similar to chemical herbicides and far superior to many other thermic and mechanical methods.
- Low plant dependency, large and small plants can be controlled
- Low requirements on the plant 's physiological activity
- Low day-night and temperature dependency
- No specific resistance expectable
- No soil movement – erosion minimized, soil conservation maximized
- No chemical residues
- No risk for underground life

In summary, it is possible to look out with optimism to the great challenges in agriculture. And while there may be no chemical replacements for Glyphosate, there will be numerous physical alternatives for weed control. Many of these innovative techniques are currently developed or already deployed in Europe. Now the task is for all parties concerned to work together in identifying the best alternatives. Only then can the health and economic risks for farmers, the environment and our society overall be kept within limits. The XPower is one new key component for a future-oriented, strong agricultural sector.



VISION

AGXTEND is the leading platform for innovative technologies in the agricultural sector.

MISSION

AGXTEND develops and provides groundbreaking technologies that allow farmers to extend their efficiency and thereby their economic success.



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