

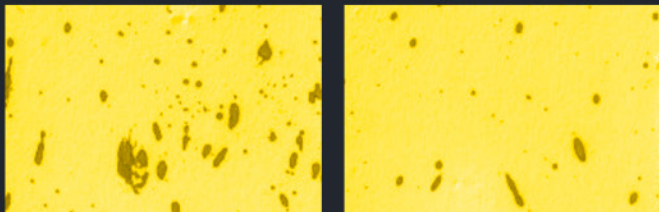
Cut chemical, pesticide & water costs by

20%-25%

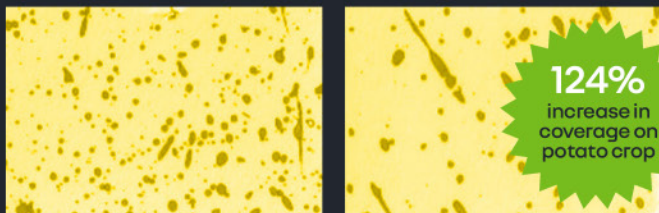
while still protecting
your **Potato Crop**

MagrowTec water sensitive card trial
on potatoes shows better coverage
and better distribution

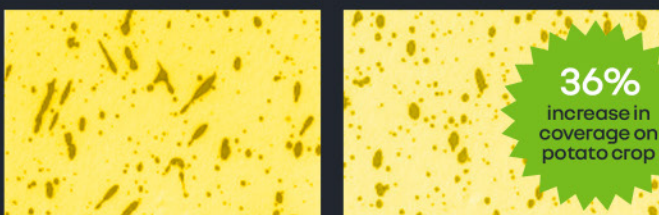
Conventional Card Images at 100% Rate



MagrowTec Card Images at 100% Rate



MagrowTec Card Images at 80% Rate



MagrowTec for Potato Growers

What problem does MagrowTec solve for potato growers?

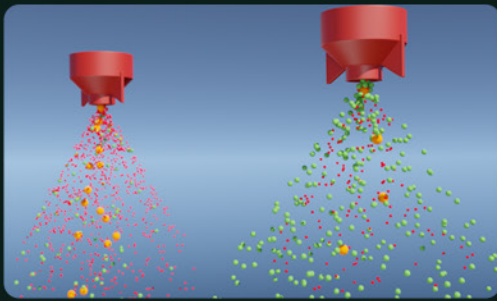
During spraying, most of potato farmers' expensive and often harmful plant protection products do not reach their crop. This is because most of the spray can drift in the air or wind, or bounce off or miss the plant entirely and enter the soil instead, damaging the environment.

This is a major and persistent problem because it is expensive, harmful, wasteful and risky. As much as 70% of the chemical inputs never get to the plant!

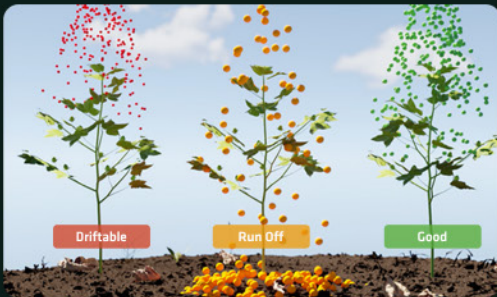
Protection is reduced, the crop and the related investment are at risk, quality and yield can be jeopardised and expensive resources like chemical inputs, water, time and perhaps most of all money are wasted. MagrowTec helps solve this problem.

What are the benefits of MagrowTec?

- ✓ Improved control in potato Late Blight by over 60%
- ✓ Cut chemical/pesticide usage by 20% or more and conserved water usage by up to 50%
- ✓ Lowered spray-drift by up to 70%
- ✓ Improved crop coverage by 20% or more
- ✓ MagGrow can save money, lower pollution, improve efficiency, control disease and ultimately help farmers grow and protect their best quality potato crop.
... with no negative impact on the crop



70% of all conventional spray does not reach the target crop and results in drift and run off, wasting money.



The importance of delivering the optimal droplet size makes sure the chemical both reaches and adheres to the target.

MagrowTec Droplet Optimization



MagrowTec is an accredited

97.5%

drift reduction technology

Source: TCT DRT List (Netherlands), October 2020



What is MagrowTec Technology?

MagrowTec is a unique and patented solution that works on seed, ware and starch potatoes. It's a piece of engineering that can be fitted to any make or model of field boom sprayer of any boom length. It's a very innovative enhancement on conventional spraying that saves money, improves spray precision and effectiveness and lowers pollution.

With only 2 main components, it's a very simple design and can be fitted to any new or existing sprayer and works with multiple nozzles. It has no moving parts, does not need a power supply, is not electronic or computer/internet based and requires hardly any maintenance. MagGrow has been proven by customers in the field and has been validated by scientific testing and research.

How Does MagrowTec Technology Help?

The MagrowTec system helps by creating more of the optimum-sized spray droplets during spraying – the best type that aren't too big or too small – ensuring that more of the spray goes onto the canopy, buds, flowers, stalk, fruit or vegetable product itself or soil, giving better coverage and more protection.

MagrowTec helps improve crop protection, lower risk to the financial investment in the crop, increase the chance of higher crop quality and yield and reduce wastage of expensive resources like chemical inputs, water, time and money.

Why Potatoes?

The harvested area of potatoes in Europe in 2018 was 5.2m ha (source: UN FAO), representing 30% of the global total.

MagrowTec works on many types of crops, but it has proved itself to be particularly beneficial for disease control in seed, ware and starch potatoes due to the high levels of disease caused by Potato Late Blight (*Phytophthora infestans*) and the associated high costs. Its canopy-penetration ability, increased spray coverage and protection reduces the impact of this potentially devastating disease, and also reduces the amount needed to be spent on pesticides, ultimately delivering a rapid return-on-investment.

MagrowTec will become even more beneficial to potato growers as climate change intensifies and more favourable conditions are created for the spread of many plant diseases, insect pests and weeds – and due to increasingly strict legislation and regulations.

Reduction rate: 20%–25% less chemicals and 20%–25% less water per ha.

Gosse Schuiling-Seed Potatoes, The Netherlands

MagrowTec Studies on Potatoes

Trials and studies are very important to highlight that MagrowTec works. Our Crop Science team carry out regular, rigorous and professional trials and studies to show how effective MagrowTec is. We encourage studies to be carried out, and we make the results available to highlight the efficacy, and add to the growing bank of study data. The following are just some examples of successful MagrowTec trials and use.

(1) Studies on potatoes in Belgium in 2021, resulted in a 28% and a 51% increase in coverage on the canopy by the MagrowTec sprayer compared to the non-MagrowTec sprayer, depending on which nozzles were used. See graph.

(2) A 2021 Blight study in France, found that the MagrowTec sprayer achieved a 26% and a 69% reduction in the incidence of blight on the crop compared to a non-MagrowTec sprayer (again, depending on which nozzle was used). See graph.

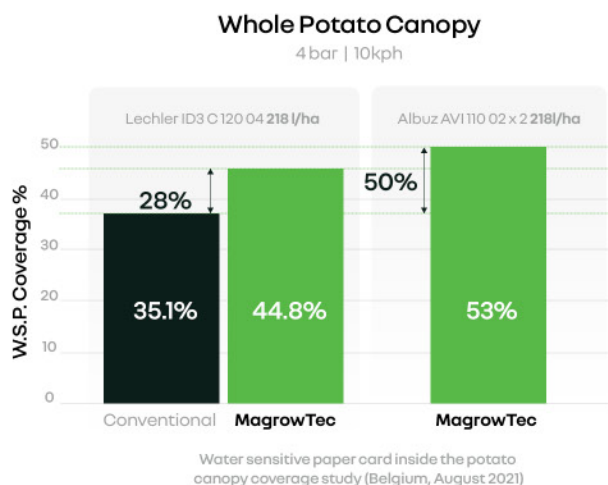
(3) Finally, A Dutch potato customer cut their chemical and water use and spend by between 20% and 25% and had no negative impact on the crop.

Why invest in MagrowTec?

MagrowTec works on many types of crops, but it has proved itself to be particularly beneficial for disease control in seed, ware and starch potatoes due to the high levels of disease caused by Potato Late Blight (*Phytophthora infestans*) and the associated high costs. Its canopy-penetration ability, increased spray coverage and protection reduces the impact of this potentially devastating disease, and also reduces the amount needed to be spent on pesticides, ultimately delivering a rapid return-on-investment.

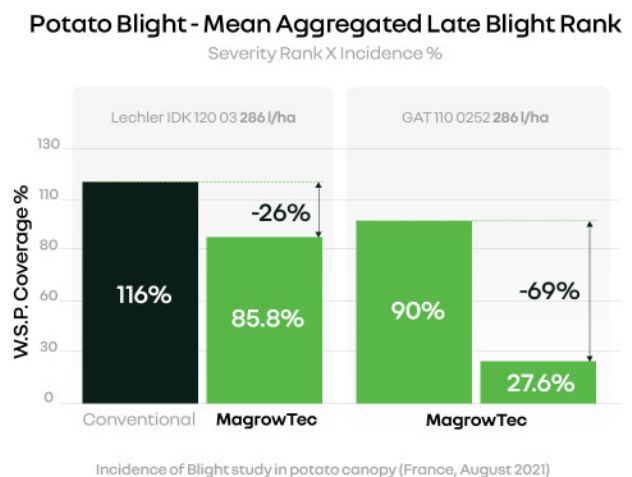
It gives potato growers a competitive advantage by allowing them save on chemical input, improve efficacy, conserve water and reduce spray-drift, with no negative impact on the crop or increased risk to the financial investment.

It produces and delivers a better spray droplet profile reducing spray-drift by up to 70% and improving coverage by 20% or more so growers can reduce their pesticide spending by 20% or more.



(1) Both sprayer using Lechler ID3 C 120 04 nozzles (spraying at 218 l/ha), the MagrowTec sprayer got 28% better coverage on water sensitive paper cards that were placed inside the potato canopy, than the non-MagrowTec sprayer.

(2) Using Lechler ID3 C 120 04 nozzles, and the non-MagrowTec sprayer using 2 x Albuz AVI 110-02 nozzles (both spraying at 218 l/ha), the MagrowTec sprayer got 51% better coverage than the non-MagrowTec sprayer.



Using Lechler IDK 120 03 nozzles, the MagrowTec sprayer had 26% less incidence of blight than the non-MagrowTec sprayer (both spraying at 286 l/ha).

Using Hypro GAT 110 025 nozzles, the MagrowTec sprayer had 69% less incidence of blight than the non-MagrowTec sprayer (both spraying at 286 l/ha).

Sample Business Case:

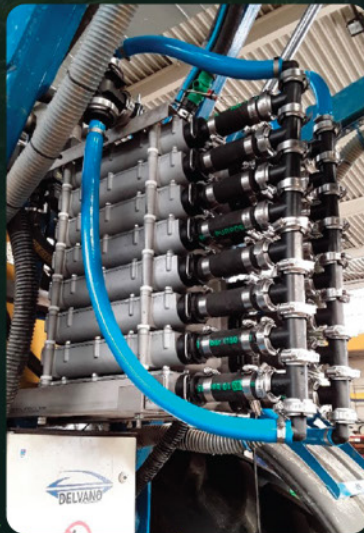
A ware potato farmer spends €150,000 annually on chemicals/pesticides per sprayer

MagrowTec safely allows him reduce chemical input/spend by 20%, saving €30,000. If the MagrowTec unit costs €37,500, this is a return-on-investment in about 16 months, which is extremely good for agricultural machinery. It can sometimes even be less than 1 year depending on the level of spend and the boom length.

Plus, this example relates only to savings from less chemical inputs. Additional benefits come from cutting water usage, wastage and costs, less trips for tank re-fills, fewer spray events plus savings on fuel and manpower costs.

Return on Investment?

A typical return-on-investment period is approx. 16 months, however depending on (a) the amounts spent on chemicals/pesticides and (b) the length of the boom, it may be a year or less!



Contact your local MagrowTec dealer for more information:
MagGrow.com/Contact