

Sustainable solutions for more growth







The only constant is change

Dear Readers,

the future is now – with sustainable and integrated agriculture.

Resources are becoming increasingly scarce, climate change is causing more and more extreme weather events, even in Europe, and consumers and politicians alike are demanding more restrictions on the use of synthetic and organic fertilisers and plant protection products. These are just a few of the challenges facing farmers today.

Stay ready for the future

These challenges always come hand in hand with increasing requirements on the agricultural sector. This consequently means that sustainable production methods must be developed and established. Many farmers are now choosing to use to integrated (sustainable) agriculture methods to stay ready for the future.

The aim of integrated agriculture and arable farming is to,

promote sustainable practices that preserve the long-term fertility of the soil and protect the environment while being economically viable.

boncrop biostimulants – building blocks for integrated crop cultivation

boncrop biostimulants are made from algae and fit into any integrated arable farming concept seamlessly. Our boncrop products come from a natural and sustainable source – Ascophyllum nodosum brown algae. boncrop biostimulants can help to improve soil health, encourage crop growth, make crops more resistant to abiotic stress and ensure more yield stability and higher yields.

With this boncrop COMPACT – Harvest success booklet,

we want to tell you all about our boncrop biostimulants, their effects and how to use them on your crops.

We hope you enjoy reading!

The boncrop Team





Chapter	Page
oreword	2
Biostimulants	4
Product line	6
Brown algae	8
itress	10
nterview with Sebastian Büning	12
ooncrop solid	18
Maize	20
oncrop flow	22
Maize	24
Cereal	28
Rapeseed	32
Potato	36
Sugar beet	40
Soya	44

 2





A natural stimulant for more growth and greater yields – about biostimulants

Biostimulants are...

Combinations of substances, usually from biological or organic material, (bio) and their stimulating effects (stimulants) on crop development, growth and resistance to stress factors. The organic material in biostimulants usually consists of microorganisms, humic and fulvic acids, amino acids and peptides, bioidentical and anorganic substances and algae preparations, among other things.

Our boncrop biostimulants are made from brown algae (Ascophyllum nodosum). Our granular boncrop solid also contains our patented strain of fungus from the Trichoderma genus as an additional microorganism.

Simply put...

The European Biostimulant Industry Council (EBIC) defines biostimulants as follows:

"Biostimulants for crops contain substances or microorganisms that are applied to the crops or the rhizosphere and whose function is to stimulate the natural processes that encourage nutrient absorption and nutrient efficiency, boost tolerance of abiotic stress and improve crop quality."

What biostimulants are not...

Biostimulants are not a replacement for crop fertilisation and/or plant protection products. However, they do have a positive effect on crops and their development, particularly if the crops are being grown under suboptimal conditions and in stressful situations during the vegetation period. Their effects have been proven in many scientific investigations, studies and exact and practical tests.

Biostimulants – the legal situation

The product group of biostimulants is the generic term for a new and complementary category of resources. Even though they are neither plant protection products or fertilisers, they are subject to the EU's Fertilising Products Regulation (2019/1009).

Biostimulants are specifically excluded from the scope of the Plant Protection Product Regulation (EC 1107/2009) as their function and way of working is different to that of standard plant protection products. Under the new EU Fertilising Products Regulation (2019/1009),



biostimulants have been uniformly, legally defined for the very first time. Since the regulation came into force in July 2022, biostimulants have been able to sold throughout Europe as Independent fertiliser products.



boncrop biostimulants meet all the requirements necessary to be considered as biostimulants:

- **boncrop** biostimulants are of biological origin and are made from organic matter.
- **boncrop** biostimulants have a stimulating effect on crops with regards to their development, growth and stress resistance, and this has been proven in exact tests, and other test methods.
- boncrop biostimulants are an algae preparation.
- boncrop solid also contains the micronutrients boron and zinc and the microorganism Trichoderma in addition to alginic acid.
 - boncrop flow contains alginic acid as well as plant amino acid and humic acid.
- boncrop biostimulants are subject to the EU Fertilising Products Regulation (2019/ 1009) and is classed under the new product function category (PFC) 6 -Plant biostimulant.





boncrop – Think solutions, harvest success

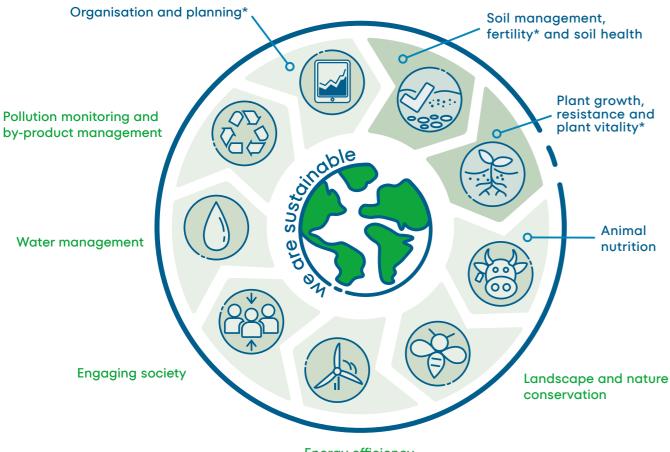
There are lots of good, important and unavoidable reasons as to why agriculture and arable farming need to be future-proofed.

The expansion and further development of a more sustainable (integrated) agricultural sector is essential if the sector hopes to meet current and future ecological, economic and social requirements.

boncrop biostimulants - valuable building blocks for integrated crop cultivation

To offer solutions for these challenges and to support the process of a modern and integrated agricultural sector, we have expanded our product portfolio to include biostimulating boncrop products for crops.

Building blocks of integrated agriculture



Energy efficiency

boncrop biostimulant products: take two!

We currently offer two biostimulant products:



is an algae-based, granular biostimulant that contains *Trichoderma*



is an algae-based, liquid biostimulant

Overview of boncrop biostimulants in crops

Product	Formula- tion	Application	Maize	Cereal	Rapeseed	Potato	Sugar beet	Soya
boncrop solid	granular	under-root fertilisation						
boncrop flow	liquid	spraying			\$ 100 mm			(Recommendation of the commendation of the com



^{*} This is where boncrop can help





Our algae raw material – only the best is good enough for boncrop

boncrop solid and **flow** are made using the broken down algae products from the brown algae Ascophyllum nodosum and place very high demands on the algae. We have perfected this algae breakdown process over the past decade.

The brown algae used in boncrop is sustainably harvested either by hand or by means of a gentle mechanical process. We place particular importance on ensuring that our suppliers meet our high quality requirements. The algae used in boncrop come from the coasts of Ireland, Scotland and Canada, among others.

Our gentle boncrop algae breakdown process

After being harvested the algae is immediately and carefully processed further to produce our high-quality, ground brown algae powder. We do this using our breakdown process which is very gentle on the algae. The result is an algae juice that is high in valuable, bioactive active ingredients and that forms the basis of our boncrop products.

All the good things in boncrop

boncrop solid and boncrop flow are packed with valuable active ingredients from the knotted kelp.

Micro- and macronutrients, trace elements, proteins, amino acids, vitamins and phytohormones such as auxin, cytokinin and abscisic acids – all this and much more is in our boncrop products. The biostimulating algae interact with the chemical and biological components in the crops and soil and encourage natural phy-

siological processes. As a result, you will get more growth and higher and more stable yields.

Knots or air bladders

The Ascophyllum nodosum in our boncrop products

- Improves the water holding capacity of the crops
- Promotes nutrient availability for fertile soils
- Protects plants from stress factors and protect the crops' metabolism
- Encourages growth and plant development





boncrop - boosts stress resistance

Like all living organisms, crops can also experience stress when subjected to unfavourable conditions and this can have a significant impact on their yields and quality.

To deal with the challenges of stress, crops have developed a range of strategies to ensure their survival. If crops are subject to stress their nutrient intake decreases and their growth, yields, quality and soil life suffers, for example.

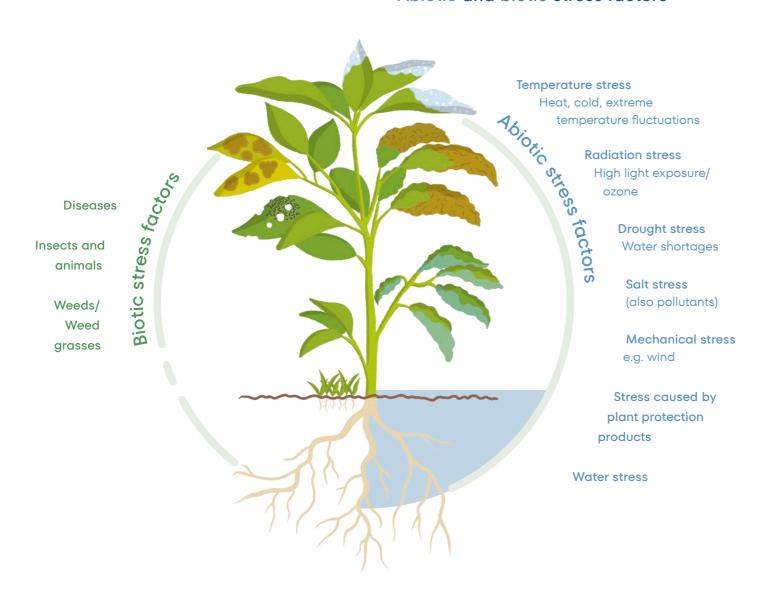
Stress factors can be classed as either abiotic or biotic stress. Both types of stress are brought about by unfavourable environmental conditions that can have negative effects on crop growth, development and yields.

Biotic stress factors are caused by biological factors, particularly living organisms, that damage the crops.

Abiotic stress factors – this is where boncrop comes in

Abiotic stress factors are not living, they are of physical and/or chemical origin.

Abiotic and biotic stress factors



boncrop and stress priming

boncrop biostimulants have a so-called "stress primer effect" on the crops that they are used on. They prepare the crops for future stress events by activating their defence mechanisms, for example. This means that the crops are able to better cope with stress.

It also important to mention the positive stress that boncrop causes.

How exactly boncrop primes crops for stress:

Activates defence mechanisms

boncrop supports and activates the crops' defence mechanisms and primes them for stress events like drought and/or extreme heat, for exaple. This helps crops react to future stress situations quicker and even more effectively.

■ Reinforces root systems

boncrop encourages root growth and development. A well-developed root system helps crops to be more resistant to drought and periods when there are less nutrients available.

Stimulates phytohormone production boncrop encourages the production of various phytohormones that play a crucial role when it comes to regulating crops' reactions to stress.



What boncrop does:

- Increases radicle development and thus a more pronounced rooting with more fine roots
- Supports and encourages the interaction between the crops and the soil
- Ensures a more efficient intake of nutrients and water, among other things, thanks to the increased root growth
- Generates a higher leaf area index and therefore a greater photosynthetic performance
- Produces stronger crops in all growth phases with greater resistance and vitality
- Stimulates crops and ensures rapid establishment
- Improved resistance, e.g. to abiotic stressors like heat, cold, dry weather, wet weather, etc., resulting in more stable yields

Effects of boncrop biostimulants				
Positive effect on	boncrop solid grows success	boncrop flow grows success		
Soil fertility	• • • •	•		
Seed germination	• • • •			
Root growth	• • • •	• • •		
Nutrient intake	• • • •	• • • •		
Plant health	• • • •	• • • •		
Stress reduction	• • •	• • • •		
Yield and quality	• • • •	• • • •		



Biostimulants – the best solution for your yields and the environment! Why boncrop has become an essential player in the modern agricultural sector.

Biostimulants are fantastic resources that can help farmers tackle the challenges they currently face in arable farming. It is no secret that restrictions on the use of fertilisers and plant protection products as part of the Fertilising Products Regulation, the "Green Deal", the "Farm to Fork Strategy" and as a result of consumer requirements are steadily growing. The increasing occurrence of extreme weather events is also problematic. Biostimulants are an important building block that can help farmers to work in a more environmentally-friendly, profitable and future-proof way. But how exactly can biostimulants help farmers? And how are they used? We sat down for a chat with product manager Sebastian Büning to find out more.

Sebastian, what exactly are biostimulants and how can they be defined?

According to the European Biostimulant Industry Council, biostimulants contain substances or microorganisms that can be applied to crops or the rhizosphere. The aim of these products is to stimulate the natural processes that encourage nutrient intake and efficiency, to boost crops' tolerance to abiotic stress and to improve the quality of the crops. Biostimulants have a positive impact on crops. However, this does not work according to the dose effect principle, like with plant protection products, or through the product's nutrient content, like with fertilisers. Biostimulants actually represent a separate, third category of resource.

Which biostimulants feature in Schaumann's portfolio?

We currently offer two biostimulants: boncrop flow, a liquid biostimulant, and boncrop solid, a granular biostimulant.

When would you recommend using boncrop flow?

boncrop flow significantly increases the stress tolerance of crops. This is particularly import-

ant during heatwaves, periods of drought and extreme cold and when the crops are exposed to anything else that "forces" them to react to external circumstances. In addition, this biostimulant significantly stimulates root growth and increases the number of fine roots that the crops have. This in turn results in a marked increase in the crops' nutrient and water intake. By improving the metabolic process and increasing the photosynthesis rate, the crops have enough energy at their disposal to maximise their potential. boncrop flow can be combined with all common plant protection products, should be applied to growing crops and can be used on almost all types of crops.

How about boncrop solid?

Now boncrop solid is a granular biostimulant that is primarily used in maize cultivation as a replacement for standard under-root fertilisation. It is the ideal partner for farm fertilisers. With this product, the focus is on improving the development of young crops, increasing root growth and boosting tolerance to abiotic stress. Thanks to the boron and zinc that the biostimulant contains, the soil does not need an additional fertilisation with farm manure to ensure high and good quality yields. The most important thing here is to make sure







that the fertiliser balance is not affected any further, particularly in "red and yellow areas", as boncrop solid does not contain phosphorus or nitrogen.

You said that boncrop flow can be used on almost any crop?

Yes, that's right. With common arable crops like maize, cereals, rapeseed, potato, sugar beets and soya, we have been able to collect some outstanding results regarding the effects of boncrop flow over the past few years. It is important to remember that while the way that the product works is similar in all crops, its effects are very different. For example, with maize we saw better-filled cobs and fewer rolled leaves during periods of drought. With potatoes, we were able to obtain a higher number of marketable goods and higher yields. With rapeseed, we were able to prevent premature pod shatter. Overall, we saw higher yields and better quality goods on average across all crops.

So why should farmers use boncrop solid?

As I mentioned earlier, the main purpose of boncrop solid is to compensate for fertiliser restrictions so that farmers can continue to harvest secure yields. If boncrop solid is applied during sowing, it has a direct influence on the young crops as soon as they emerge. Root growth and nutrient intake are increased. The crops' reaction to abiotic stress is improved which comes in handy at the beginning of their life cycle when cold poses more of a problem than heat. As long as the soil is well supplied and farm fertilisers are use, boncrop solid is the perfect complementary product to help farmers get more positive effects than they would get when using only conventional under-root fertilisation. And it does so without having any impact on the fertiliser balance.

Do you need special equipment to apply boncrop?

No, boncrop solid can be applied with standard under-root equipment and in theory can also be spread with a fertiliser spreader. boncrop flow can be applied with any standard plant protection product sprayer.

What does boncrop contain?

Our starting material is Ascophyllum nodosum, brown algae or "knotted kelp", that we carefully and sustainably harvest from the coastlines of the North Atlantic. We have developed a special process that gently breaks down the algae and allows us to preserve all the contents and make them available for the crops.

boncrop flow also contains additional plant amino acids and humic acids which help to increase the crops' tolerance of stress even further. In addition to other content and carrier substances, boncrop solid also contains sufficient quantities of boron and zinc.

We even work with our very own strain of Trichoderma. It is a fungus that has a high synergetic effect with the algae itself and a very positive impact on root growth.

Why should farmers use biostimulants?

Your question should be: Why shouldn't farmers use biostimulants?

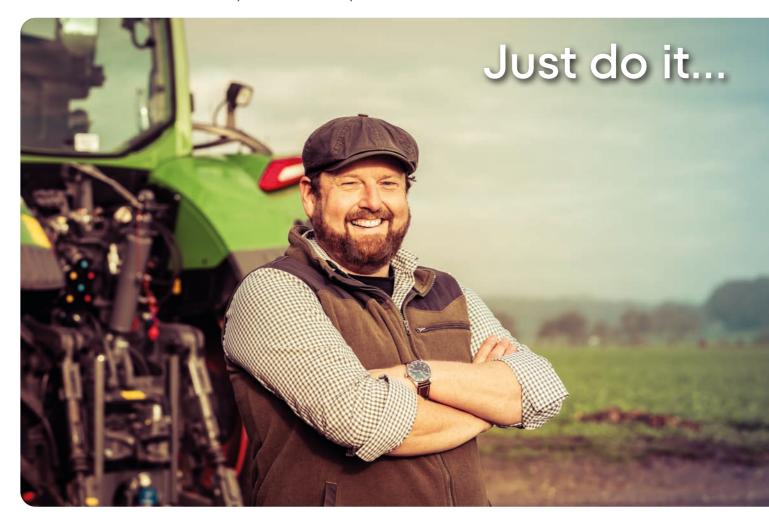
Alright, why shouldn't farmers use biostimulants?

There are a lot of products on the market with the same or similar effects. It can be difficult to separate the wheat from the chaff. In my opinion, this is one of the most legitimate reasons for the scepticism surrounding

biostimulants.

boncrop is obviously the exception to the rule here...

Of course! We optimised our breakdown process several years ago and similar products have been used in specialised crop meet the high quality requirements that both we and our customers place on our products. This is why we only share our products with our customers when we are sure that they are perfect. And this is what we did with boncrop too! That is what we are all about.



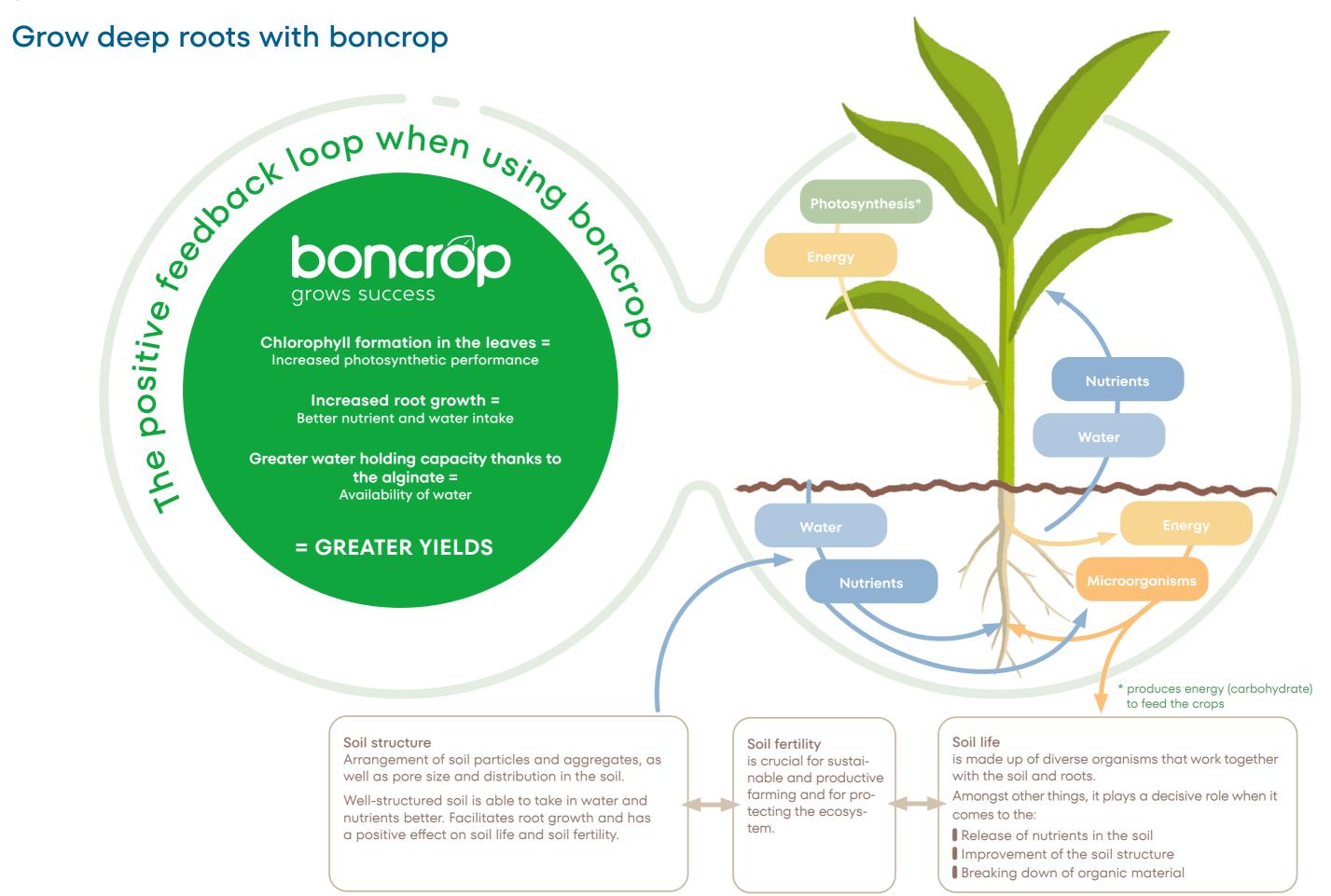
cultivation for a while now. The market has undergone a transformation over the last few years and the search for new solutions in the agricultural sector is bigger than ever before. This is what pushed us to start extensively testing and optimising our biostimulants in arable farming several years ago, resulting in us introducing boncrop to the market now. We take care of research, development and production so that we can act as a consistent and reliable partner for our farmers. Anyone that is familiar with Schaumann knows that we always strive to

How exactly do you do this?

Over the past few years we have carried out many practical demonstrations across Germany to see just how well our products work for ourselves. In addition, certified testing bodies carried out the exact tests we needed to register the products at the same time. We were very happy with the results.

That sounds really promising! Thanks for taking the time to talk to us Sebastian.







Product information



The granular biostimulant for a quick start with extra living microorganisms.

A winning combination: valuable active ingredients from algae + micronutrients + *Trichoderma* strain = boncrop solid

Trichoderma and Ascophyllum nodosum – the interaction of these two components, which have been specifically tailored to one another, optimises nutrient availability and intake, e.g. with young maize crops, boosts resistances and increases the young crops' tolerance to stress. This is shown with increased root growth, fewer stress symptoms and better-filled cobs and ears – your yields will say it all!



boncrop solid – advantages

- Packaging in big bags
- Granular
- Secures and boosts yields and crop quality
- Contains valuable ingredients
- Wide range of effects
- Does not impact fertiliser balance
- Efficient spreading

Benefits

Easy to use and dose

Easy to spread, generates little dust, good spreadability

Perfect for poorly supplied areas when applied using standard under-root fertilisation

Alginic acid, micronutrients boron and zinc, living microorganisms (*Trichoderma*)

Strengthens crops from the roots up Encourages quick germination and boosts plant resistance, ensures powerful root growth and a good tolerance to cold weather, promotes robust and vital plants, improves phosphate availability and harvest yields

Ideal complement to farm manure

One step during maize sowing with / or as classic under-root fertilisation

Product information					
Crops	Product form	Packaging	Spreading	Aufwandsmenge	Dates
Maize (Granules	12.7.4. 120000	Standard under- root equipment	125 kg/ha	With the maize sowing
Cereal	Granules	1-1-1-1 100000	Fertiliser spreader	125 kg/ha	Before the cereal sowing
Contents:	Alginic acid, micronutrients boron and zinc, living microorganisms (<i>Trichoderma</i>)				
Targeted effects The rapid germination ensures efficient root growth from the beginning. Ensures good tolerance to cold weather, improves phosphate availability, boncrop solid boosts the resistance and produces robust, healthy crops and better harvest yields.					
As classic under-root fertilising: Under-root fertilising ensures that the active ingredients are available in the direct vicinity of the young crops. boncrop solid can be applied when the seeds are sown. In comparison to standard under-root fertilisers, boncrop does not pose a risk to the seedlings as it can also be applied directly to the seeds. Depending on the equipment used, it can also be applied in a standard placement (5 cm laterally and 5 cm under the seed row).					



Our exclusive Trichoderma strain in boncrop solid

Trichoderma is a fungus that grows in soil under natural conditions. It is a type of sac fungus (Ascomycota) and develops in the fine root area of plants. Trichoderma works with the crops' metabolic products to produce the enzymes and hormones that the crops need.

Not only does this strain of fungus have a positive impact on the crops, but it also improves soil fertility and boosts the microbial activity in the soil. The result is an intensive rooting

that supports a better and more efficient supply of nutrients and water. At the same time, abiotic stress caused by external influences like drought, waterlogging, heat, cold and frost is reduced. To get the most out of the fungus, it should be used in the crops in the earliest stages of their development as possible.

As such, boncrop solid is perfect for use during maize sowing!





Trichoderma makes all the difference!

boncrop solid supports a range of different application goals in maize

The interaction between *Trichoderma* and *Ascophyllum nodosum* optimises the nutrient availability and intake of the young maize crops, boots resistance and increases the stress tolerance.



Product information

- Granules
- 1,000 kg Big Bag
- Application rate: 125 kg/ha
- Date: At the same time as the maize sowing



boncrop solid – advantages in maize crops

- Optimal combination of the biostimulating algae contents, like alginates, with the specific micronutrients boron and zinc and so complete coverage of these micronutrient needs
- Improves phosphate availability
- Secures higher yields even without or with minimal under-root fertilisation
- Can easily be combined with organic fertilisers
- Easy to use

Benefits

Alginates increase tolerance to stress, zinc is important for a good development of the young crops. Boron supports pollen and fruit development, among other things, and so helps to increase yields

Thanks to the stimulation of root growth, the available phosphate can be "tapped into" more efficiently

No impact on the fertiliser balance, higher yields

In just one work step, boncrop solid creates optimal starting conditions for germination, root growth and the development of young crops thanks to the micronutrients zinc and boron

Easy to handle thanks to the big bags, can be combined with the maize seeding

Insights from boncrop practical demonstrations

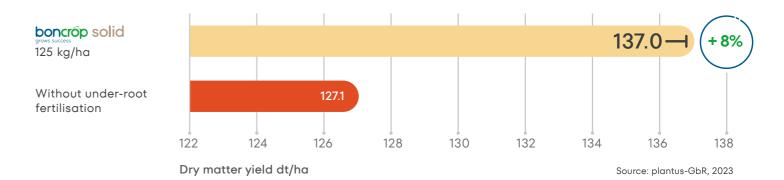






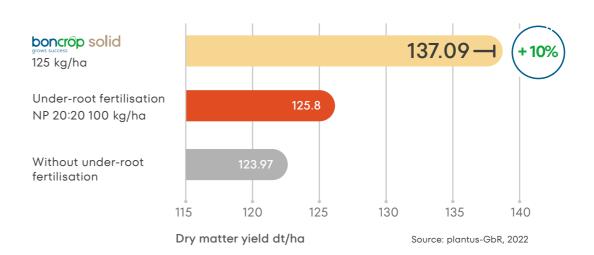


boncrop solid exact test with grain maize 2023 Location: Huntlosen, Germany





boncrop solid exact test with silage maize 2022 Location: Huntlosen, Germany









Terrific results!

With the valuable biostimulants alginic acid, plant amino acids and humic acids, boncrop flow activates crop metabolism and boosts root formation.

boncrop flow can be applied by spraying. It is effective and easy to use.



boncrop flow

- I Contents: Alginic acid, plant amino acids and humic acids
- I Boosts the assimilation rate, root formation and nutrient intake of the treated
- Improves abiotic stress tolerance
- I Minimises water loss through leaf evaporation
- **Boosts** the resistance
- I Results in healthy, robust crops and high yields
- I Strengthens the crops from the inside out
- I Can be easily combined with all common plant protection measures
- I Authorised for use in organic agriculture



boncrop flow and the stress primer effect preparation is key

As a biostimulant, boncrop flow has a "stress primer effect" on the treated plants. They prepare the crops, e.g. by activating their defence mechanisms, for future stress events. This means that the crops are able to cope better with stress.

Stress priming

The term "stress primer" comes from the fields of biology and ecology and is often used in connection with plants and crops. The basic idea behind this term: Prior exposure to minor or not too severe stress can cause crops and plants to activate specific defence and protective mechanisms. These mechanisms prepare, or "prime", plants and crops so that they react to stress factors better in the future. The stress primer effect is actually based on the plants' and crops' "memories" of previous stressful situations.



Product information













23

Contents

Alginic acid, plant amino acids and humic acids

Target effects

Boosts the assimilation rate, root formation and nutrient intake of the treated crops. Improves tolerance of drought and cold stress. Minimises water loss through evaporation.

boncrop flow boosts the resistance and produces robust, healthy crops and higher yields.

boncrop flow strengthens the crops from inside out.



Packaging

- 10 I canister
- **1** 2 canister (20 I) per box

Product information					
Crops	Product form	Packaging Canister	Application	Recommended application rate	Termin-BBCH
Maize	Liquid	boncrop	Foliar spraying	2 l/ha*	From 14
Cereal	Liquid	boncrop flow	Foliar spraying	2 l/ha*	From 21 Start of planting
Rapeseed	Liquid	boncrop	Foliar spraying	Autumn 1 I/ha* Spring: 2 I/ha*	From 14 33-35
Potato	Liquid	boncrop	Foliar spraying	Two treatments à 2 l/ha*	30-40 Hoeing stage/Row clo- sure and repeat after approx. 7-21 days
Sugar beet	Liquid	boncrop flow	Foliar spraying	2 l/ha*	To row closure
Soya	Liquid	boncrop	Foliar spraying	Two treatments à 2 l/ha*	12-14, 61

^{*} Water application rate: 100-1,200 |





Stress priming at its best

Reduce stress in maize crops throughout their life cycle thanks to stress priming.

Not only does boncrop flow boost root formation in maize crops, it also strengthens their tolerance to drought and cold stress. Better safe than sorry – maize crops are all set for success when boncrop solid is applied during the sowing!



Benefits

• Focus on increasing stress tolerance through stress priming

Optimally prepares maize for stress events, like cold stress during the development of the young crops, drought stress and stress during flowering.

Improves root growth

Improved water and nutrient availability, particularly during the summer months when access to water and nutrients is essential for yield formation.

Secures and boosts yields and crop quality

The interaction between high nutrient efficiency, good water retention, improved photosynthesis and an optimised metabolism results in incredibly vital crops

Insights from boncrop practical demonstrations























boncrop flow

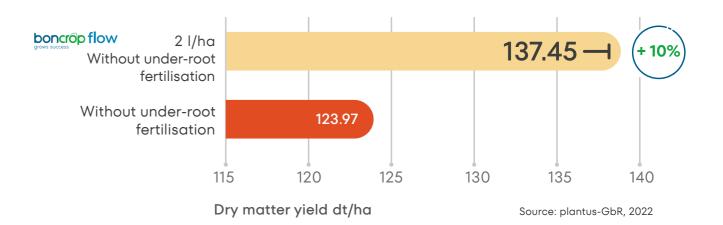
We recommend using boncrop flow from the four-leaf stage:

- This gives the crops enough time to react positively to the treatment (crop fortification)
- The young maize crops get an optimal intake of the biostimulating active ingredients
- Excellent to combine with herbicide measures in the four- and eight-leaf stages

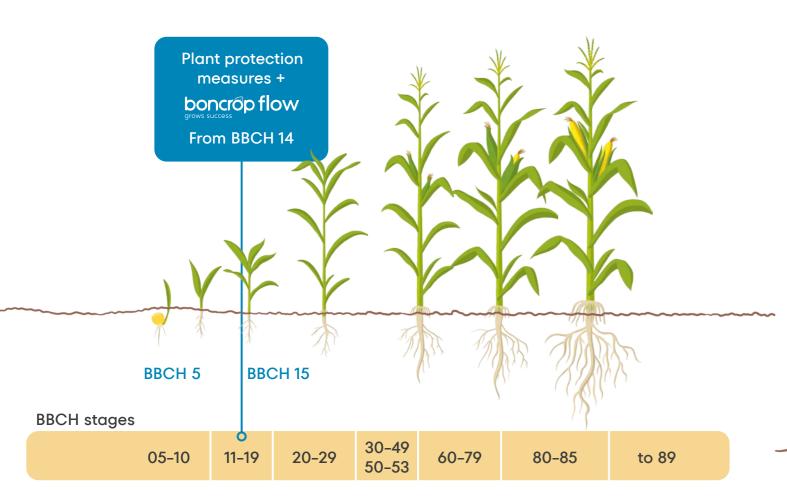


- From BBCH 14 (2 I/ha)
- Water application rate: 200–500 l/ha

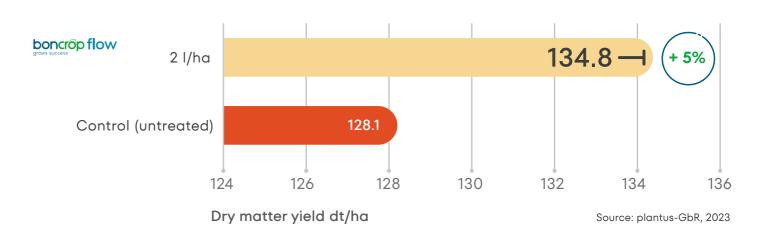
boncrop flow exact test with silage maize 2022 Location: Huntlosen, Germany

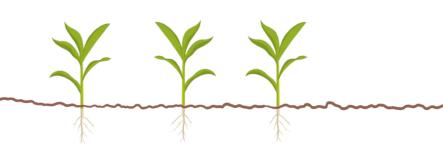


Maize under normal growing conditions



boncrop flow exact test with grain maize 2023 Location: Huntlosen, Germany









Greater yield stability and quality

boncrop flow optimally prepares cereals for stress events in the yield-forming phase.

Stress is one issue, the yield is the other. By increasing chlorophyll formation, **boncrop flow** helps crops to achieve a higher photosynthesis rate, ensuring that there is more energy available for yield formation.



boncrop flow – Advantages for cereals

• Focus on increasing stress tolerance through stress priming

Encourages the development of a good root system

Ensures a vital metabolism in cereal stocks and faster detoxification

Increases chlorophyll formation

Fewer inferior ears

More even growth

High stability

Cost-effective and easy to use

Benefits

Optimally prepares cereals for stress events like drought stress during flowering, amongst other things

Ensures a sufficient availability of nutrients and water

Healthy stocks with a high degree of resilience

Increases photosynthesis rates and therefore available energy for yield formation and other things

More fully formed ears for high yield stability

More homogeneous stocks: easier application of fertilisers and plant protection products;

more even and efficient use of water

and nutrients

Reduction of storage risks and therefore avoidance of crop failure

Can be applied in combination with all standard plant protection treatments in just one pass, this means less stress on the soil and

saves money and time



















boncrop flow

We recommend using boncrop flow **on growing cereal stocks**:

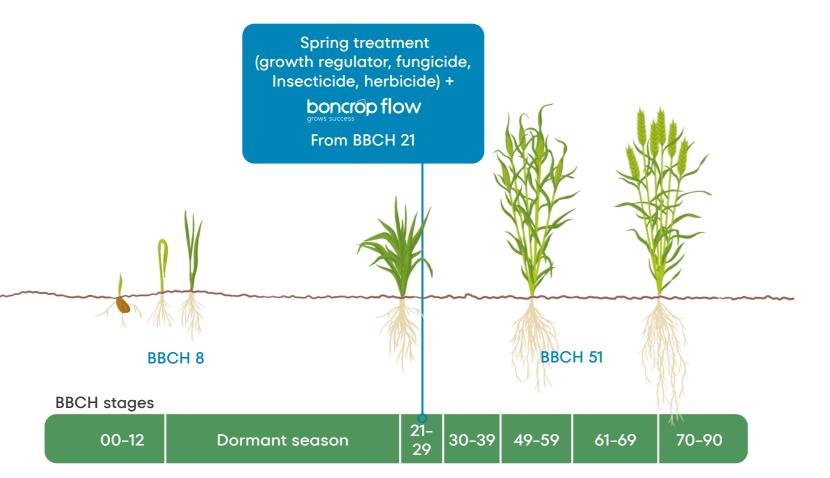
- In cereal cultivation, the most important things are yield and quality.
- Give crops the best start to the yield-for ming phase possible by ensuring that they have an increased tolerance to abiotic stress, greater root growth and better photosynthesis.

For example, wheat growing

under normal conditions

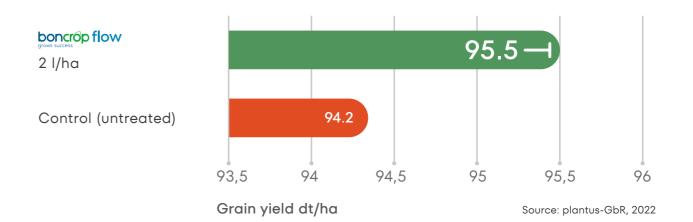


- From BBCH 21 (start of planting 2 I/ha)
- Water application rate: 200–500 I/ha



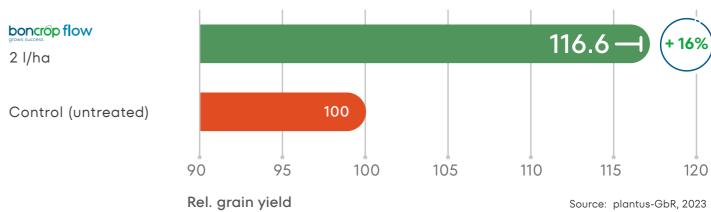


boncrop flow exact test with winter wheat 2022 Location: Huntlosen, Germany





boncrop flow exact test with spring barley 2023 Location: Huntlosen, Germany







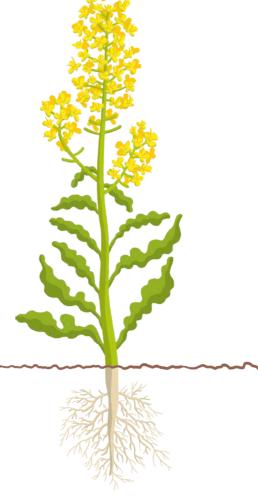


No need to worry!

boncrop flow is also effective with rapeseed and reduces yield losses.

With rapeseed, good pre-winter development, a rapid re-sprouting after winter, optimal pollination and a high degree of pod strength are crucial when it comes to guaranteeing the yield and quality of the rapeseed crop.

boncrop flow – advantages in rapeseed	Benefits
Treatment before winter	Better root growth (taproots) increases tole- rance to cold and ensures rapid budding after the dormant season
Treatment in spring	Optimal support of the crops' metabolic process, photosynthesis, roots, nutrient and water intake and stress tolerance
Contributes to pod stability	Greater flexibility with harvesting dates, reduction of yield losses



















Optimal time of use and application rates

We recommend using boncrop flow on rapeseed at two different dates:

boncrop flow

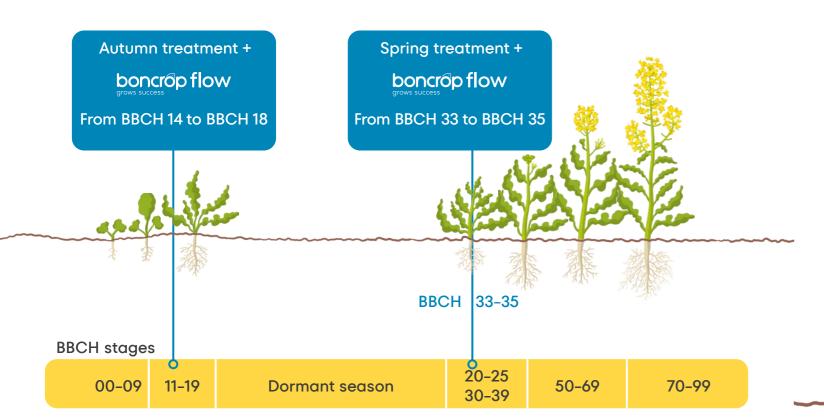
- With the treatment before winter: boncrop flow must be applied to growing crops, this means that a treatment must be applied at least two weeks before the crops' dormant season.
- 1 70% of a rapeseed crop's yield is determined before winter, therefore the plants should head into their dormant season being as strong as possible.
- With the treatment in spring: boncrop flow must be applied to growing crops.

This way, we are able to achieve a high degree of tolerance to abiotic stress and high, good-quality yields.

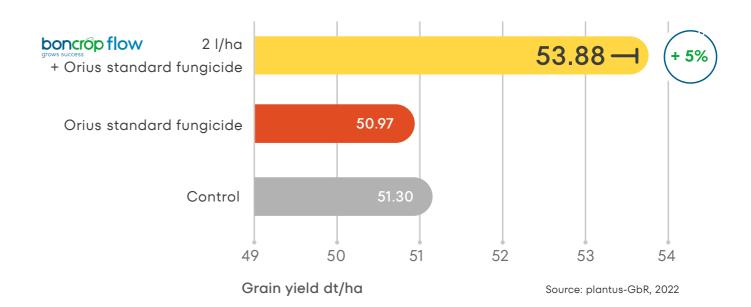


- From BBCH 14 (autumn: 1 I/ha) and BBCH 33-35 (spring: 2 I/ha)
- Water application rate: 200-500 I/ha

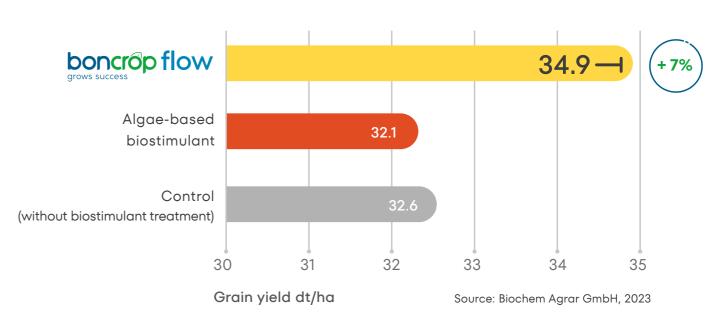
Rapeseed under normal conditions



boncrop flow exact test with winter rapeseed 2022 Location: Huntlosen, Germany



boncrop flow exact test with winter rapeseed 2023 Location: Bamberg, Germany







Strength against stress

Potatoes are a valuable yet demanding crop.

boncrop flow supports potato growth in many different ways. It starts with the root growth and even encourages a higher photosynthetic performance and better tolerance to stress.



boncrop flow advantages for potatoes

I Significantly better root growth

■ Combination of better tolerance to stress with higher photosynthetic performance

Supports a more powerful metabolism with higher plant vitality

More even growth

More even sorting

Benefits

Better approach for higher yields

Better drought stress tolerance makes irrigation management easier during temporary water shortages, more starch is generated as a result of the higher photosynthetic perfor-

More homogeneous plant growth

More homogeneous sorting

More marketable goods





Application rates/Exact tests



We recommend using boncrop flow on potatoes at two different times:

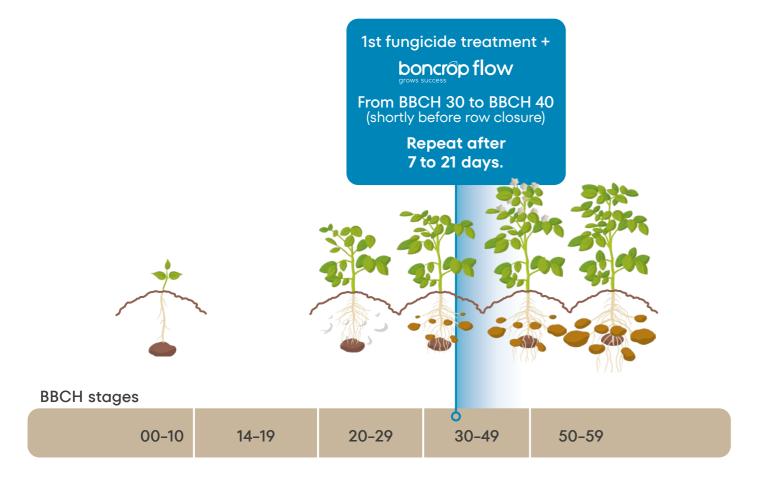
- I The first treatment with boncrop flow should be carried out at the start of the sprouting phase (usually just before the row closure) in order to optimally secure the vitality, photosynthetic performance and yield formation of the potatoes even when they are subject to stress
- The second treatment should be carried out between days 7 and 21 (depending on the farm's plant protection measures)

• An additional pass is not needed as boncrop flow can be combined with all common plant protection measures



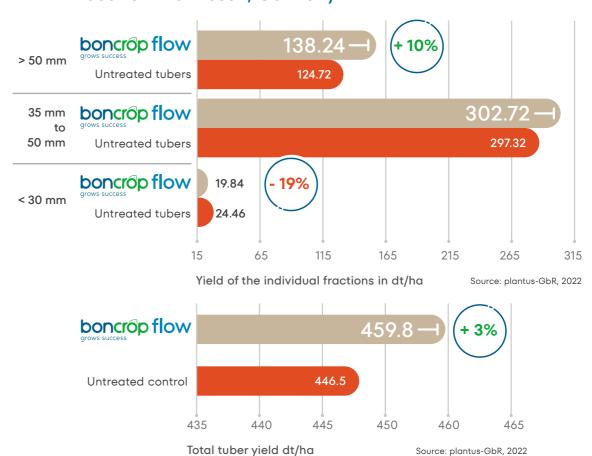
- From BBCH 30–40 (hoeing stage/row closure) and repeat after around 7–21 days (à 2 l/ha)
- Water application rate: 200–500 I/ha

Potatoes under normal conditions

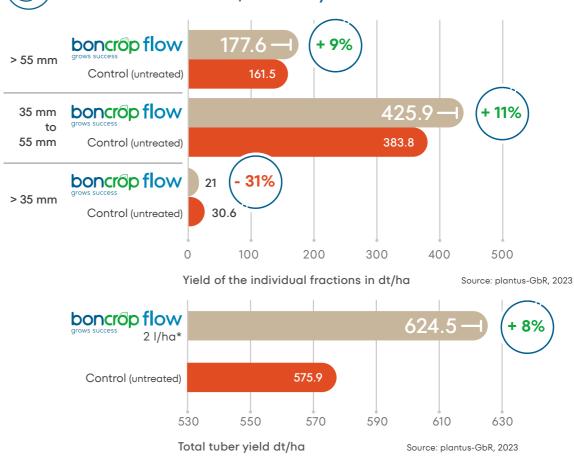




boncrop flow exact test for Chenoa potatoes 2022 Crisp and chip potato, irrigated Location: Huntlosen, Germany



boncrop flow exact test for Belana potatoes 2023 Location: Huntlosen, Germany







Only beets with upright leaves produce sugar

Sugar beets have particularly high requirements when it comes to soil quality.

Healthy and well-formed leaves with an optimal photosynthesis rate and a well-functioning metabolism are essential for high yields. boncrop flow provides crucial support here.



boncrop flow advantages for sugar beet Benefits

I Supports the development and maintenance of healthy leaves

Increases photosynthetic performance in combination with a healthy metabolism

Reduces stress reactions, e.g. during periods of heat and drought

Better root growth

• EUse together with the weed treatment (second or third)

More leaf surface means more photosynthesising potential

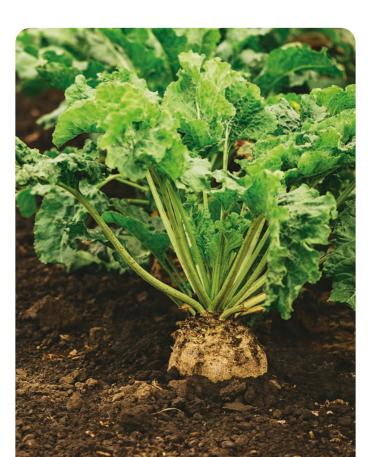
Ensures that the crops produce and store as much sugar as possible and that this can be harvested at the end

The crops' leaves do not start to hang as quickly and perk up again much more quickly than usual Only plants with upright leaves produce

Efficient water and nutrient intake

Practical and efficient to use





















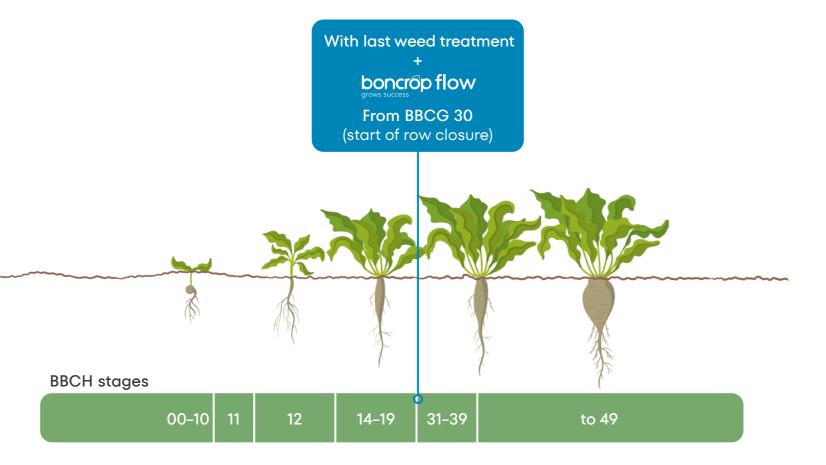
We recommend using boncrop flow on sugar beet crops at two different times:

■ Together with the last weed treatment (second or third), shortly before row closure, has proven effective



- From BBCH 30 (before row closure 2 I/ha)
- Water application rate: 200–500 I/ha

Sugar beets under normal conditions









Meal, tofu and biodiesel

Soya is a multi-talented crop and one of the oldest cultivated crops in the world, it is also increasingly being grown in Germany.

Soya cultivation has only been practised more intensively in Germany for around 15 years. Breeding is now also providing more and more cultivable varieties for local growing areas. The newcomers to German fields are now winning over consumers with their values in many areas – even more so when boncrop flow is used.



boncrop flow – advantages for soya

More rapid development of young crops

Better root development

Higher photosynthesis rates and well-functioning plant metabolisms

Increased stress tolerance and quicker regeneration after stress events

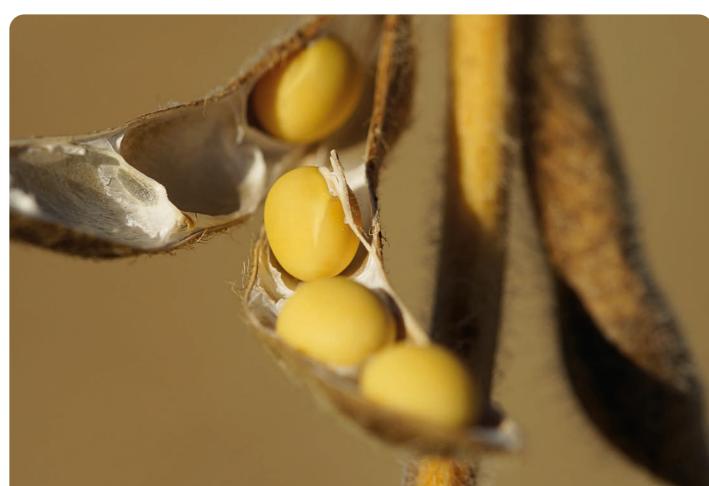
Benefits

For quick crop closure

Lots of roots means lots of root nodules and lots of nodule bacteria – this means lots of nitrogen and higher yields

Means a good supply for the nodules and nodule bacteria, among other things

Well-developed crops with stronger symbiosis performance, greater yields and oil content

















Optimal time of use and application rates

We recommend using boncrop flow on soya crops at two different times:

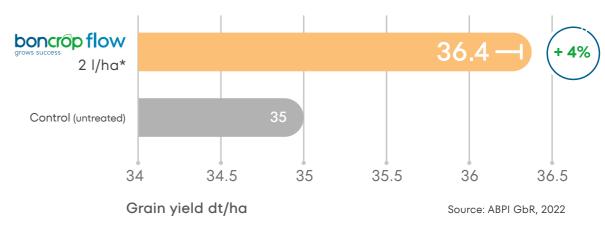
- I First treatment between BBCH 12-14 in the vegetative phase of foliar development to accelerate the development of young plants and row closure
- Second treatment around BBCH 61 when crops start flowering to support the crops as best possible during the upcoming yield formation period



- From BBCH 12-14 and BBCH 61 (à 2 I/ha)
- Water application rate: 200–500 l/ha

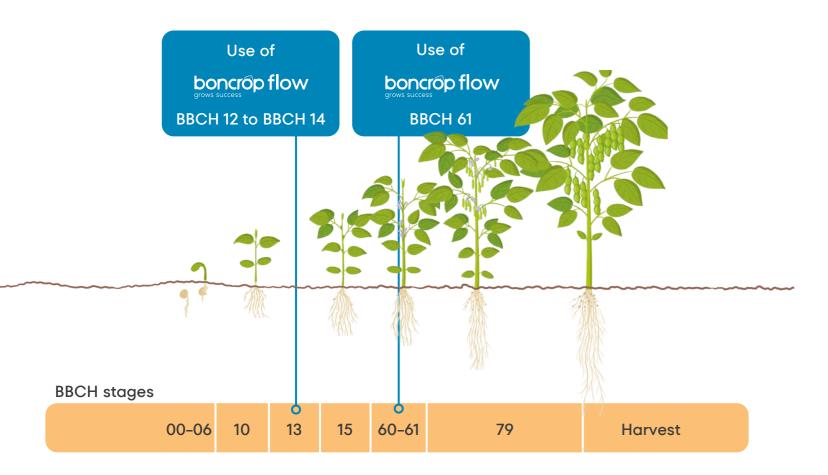


boncrop flow exact test with soya 2022 Location: Haigerloch, Germany



*Treated at BBCH 12-14 and 61 with 2 I/ha

Soya under normal conditions





Sustainable solutions for more growth



boncrop film

Scan the QR code and watch the product film





Schaumann Agri International GmbH An der Mühlenau 4 25421 Pinneberg Germany Tel. +49 4101 218 5300 www.schaumann.info Schaumann Agri Austria GmbH & Co. KG Jakob Fuchs-Gasse 25-27 2345 Brunn am Gebirge Austria Tel. +43 2236 31641 0 www.schaumann.info