

With joint forces against **Cercospora** The CR+ Manual

SEEDING
THE FUTURE
SINCE 1856

KWS





Cercospora Protection



Yield Performance

KWS – Seeding the future

For the successful and long-term push back of Cercospora, farmers need to combine the benefits of CR+ with classic protection measures.

The KWS AgroService provides a guidebook for a targeted Cercospora control. In case of further questions, you are welcome to contact us: sugarbeet@kws.com



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„**Green leaves until harvest**“
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CR+
more than
a variety

CR+ varieties offer **new and excitingly strong options** to push back Cercospora. In many cases Cercospora spots appear later and the expression of the disease is reduced. This allows to rethink Cercospora management towards a more field-tailored approach.

Protection

With less fungicides available and resistance developments towards some fungicidal mode of actions, the CR+ varieties are a **strong new element** in your Cercospora control strategy.

The combination of **CR+ varieties with an optimized fungicide use** offers the chance to minimize diseases impact onto your crop as well as to reduce the long-term Cercospora pressure.

Productivity

Even in years with exceptionally high Cercospora pressure the CR+ varieties are able to deliver **high and reliable sugar yields**, ensuring the productivity of your sugarbeet.

Sustainability

CR+ varieties in combination with classic plant protection measures offer the chance for **a long-term sustainable Cercospora control**: As part of strong resistance management, CR+ varieties protect the fungicides and vice versa.



The management goal of CR+

Green leaves until harvest

Protection, Productivity and Sustainability
go hand in hand!

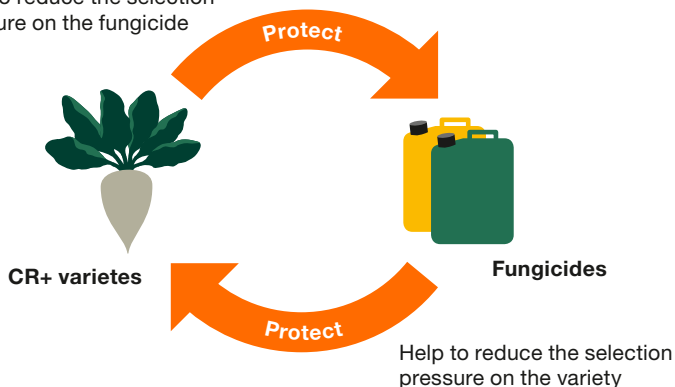
What's behind the management goal „Green leaves until harvest“?

„Green leaves until harvest“

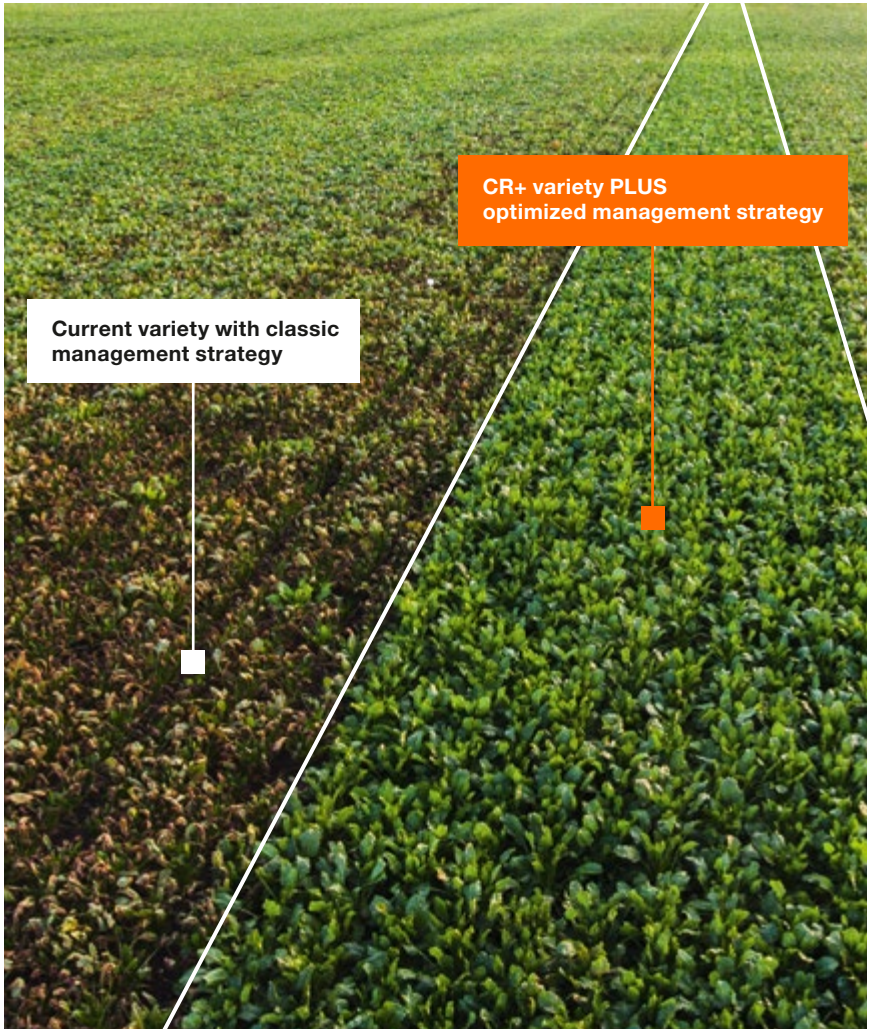
is the management goal of the CR+ because:

- your beet will stay fully productive.
- it will break the cycle of infection. This year's infected leaves are the starting point for the new infection next year.
- disease pressure is reduced what leads to a higher longevity of fungicides as well as of the CR+ trait.

Help to reduce the selection pressure on the fungicide



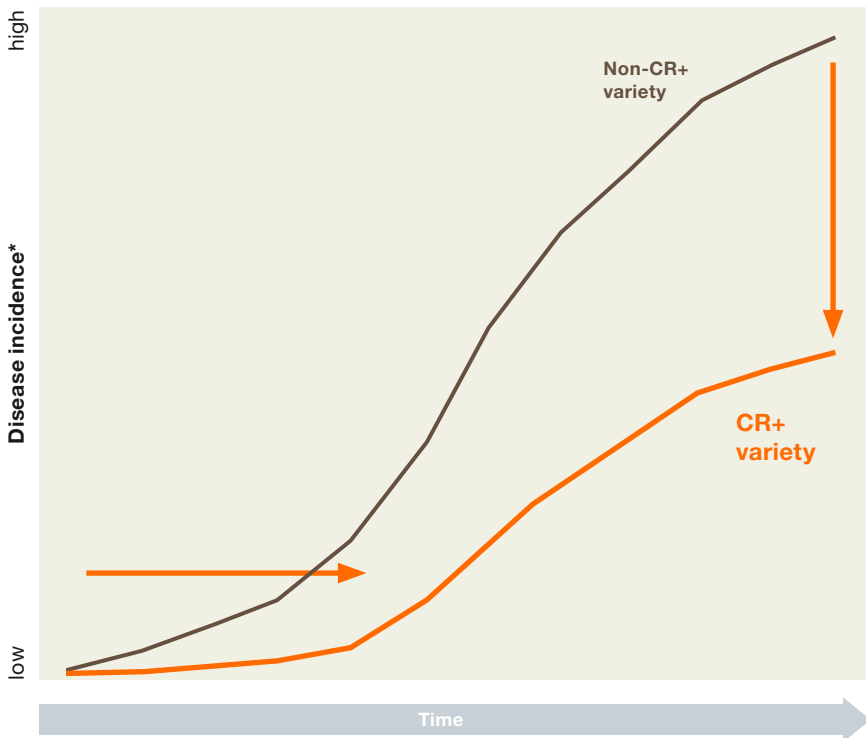
- this year's effort in combining CR+ with a targeted fungicide strategy will pay-off today and even more in the future.



CR+ trials, The Netherlands, 2020

What might change in the disease development of your CR+ variety?

Reduced disease progression in CR+ varieties



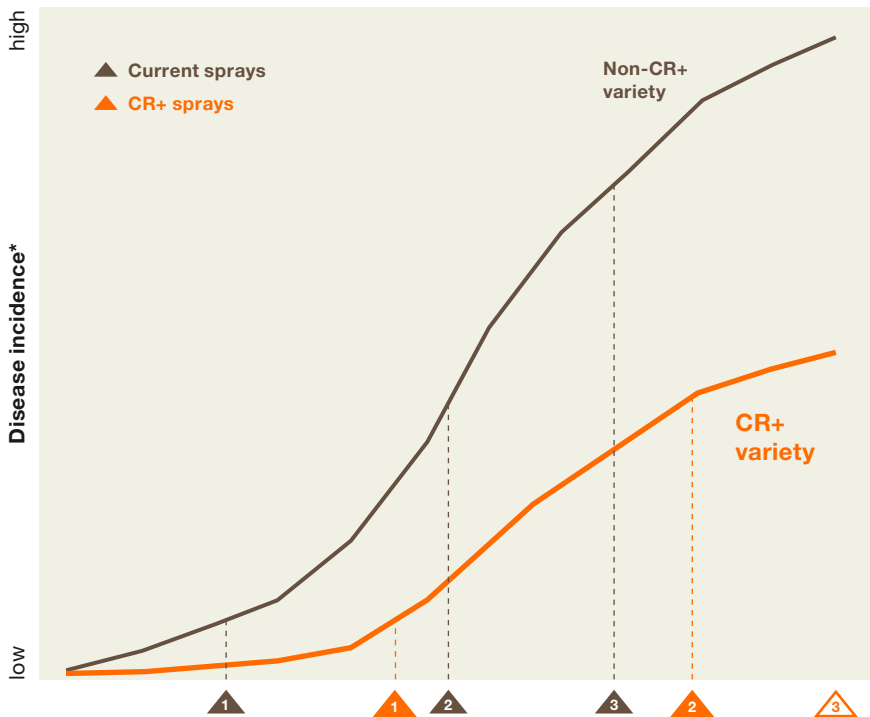
- CR+ varieties show later appearance of the spots.
- Diseases progression is reduced in CR+ varieties.

*Disease incidence = % of leaves with at least one spot

Source: KWS SAAT SE & Co. KGaA, International AgroService, Schematic graphic

What might change in the management of your CR+ variety?

New spraying sequence in CR+ varieties



- First spray is commonly later in CR+.
- CR+ spray interval might be prolonged.
- CR+ spray saving potential \triangle depends on disease pressure, weather conditions and harvest date in each year.

How can I
optimize my
CR+ management
strategy?

Check your fields individually

1. Do not follow the standard call for an efficient CR+ spray timing.
2. Threshold may be reached later.
3. Monitor other foliar diseases like Powdery mildew, Rust and Ramularia.

Fungicide Application

1. Spray, when the threshold is reached in your individual CR+ field – do not spray before.
2. The 1st treatment stays the most important: if you don't stop *Cercospora* from the beginning, the population increases exponentially.



The treatment of CR+ varieties follows the existing thresholds. But: the thresholds will most likely be reached significantly later by CR+ varieties.

Can I save
fungicide
application(s) with
CR+?

The potential for fungicide savings depends strongly on the individual conditions in the respective year.

- The first application in CR+ stays the most important one and needs to be spot on to stay ahead of Cercospora.

But the first application in CR+ will most likely be later compared to current varieties – timing matters!

- Intervals between applications might be prolonged.
- The number of fungicide applications depends on the Cercospora pressure specifically in each season.

Don't forget: Keep an eye on other leaf diseases



Powdery mildew
20–25 °C
Favoured by alternance of
dry and wet periods



Ramularia
15–20 °C
Favoured by humid
conditions



Rust
15–22 °C
Favoured by humid
conditions

How can I improve my fungicide spraying?

Be sure the application you do is done with maximum efficacy.



Ensure the saturation of the entire canopy for complete protection of the leaf.

Using the appropriate amount of water (up to 300–400l water/ha).



Never spray above 25 °C to avoid evaporation. On warm days preferably spray in the early morning.

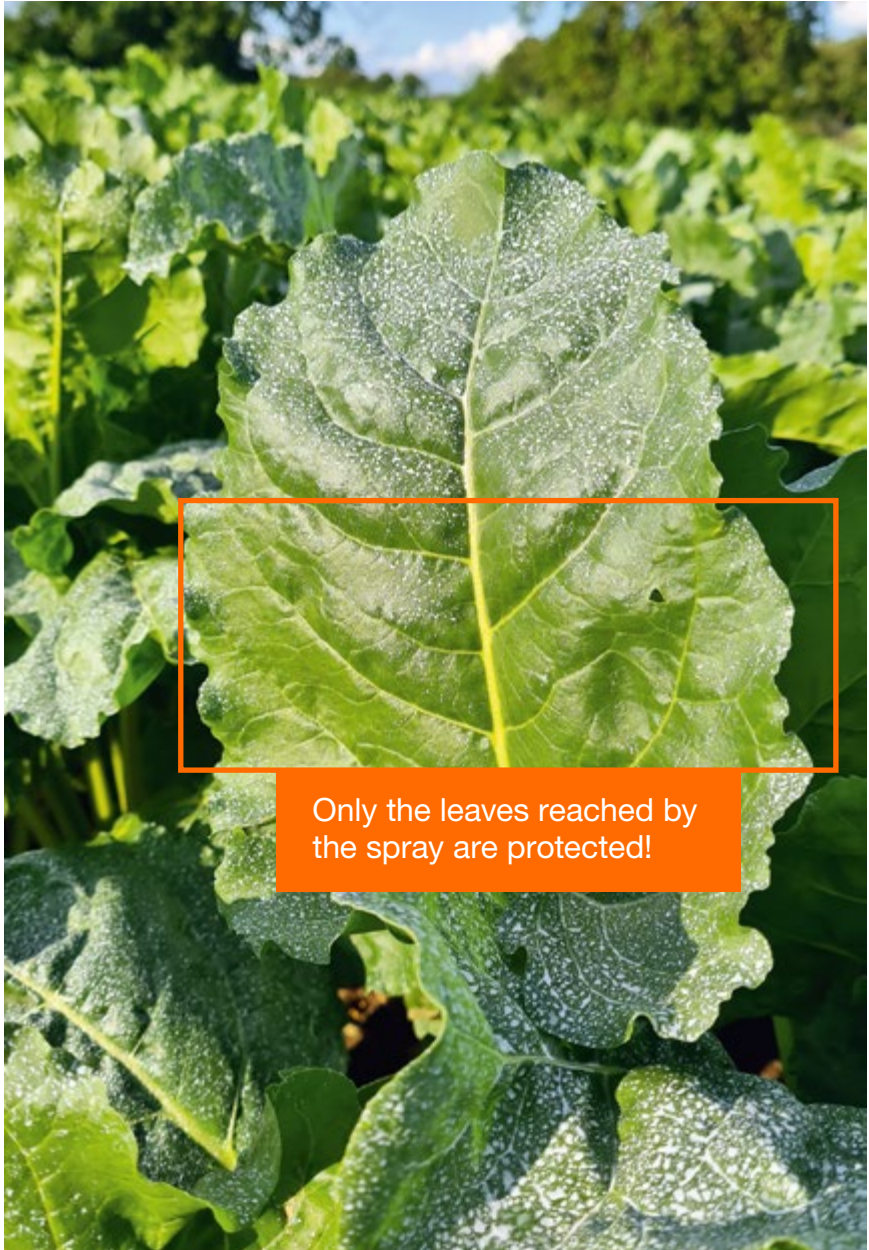


Adapt pressure, nozzle type & size to reduce drift and evaporation. Double flat fan nozzles help to avoid spray shadows.



Don't forget: spraying fungicides is much more challenging than spraying herbicides.

The leaf area can be more than 4 times the size of the soil surface!



Picture: Jürgen Fiest, ARGE Zuckerrübe Südwest, DE 2021

Your checklist to keep fungicides effective

As a result of a limited number of fungicides, there is high selection pressure on the few remaining ones.

The following advices should be considered in order to maintain their efficacy:



Do not use one product exclusively!

- Use and rotate the full range of fungicide modes of action.
- Combine fungicide modes of action in a tank mix.



Always use the full dose rate.



Follow the manufacturers' recommendations on the label.



Apply in appropriate conditions: avoid wind, rain, high temperatures.



Timing is key – never be too late!



Use integrated disease management measures: crop rotation, variety choice, field hygiene.

What do I need to keep in mind for CR+ varieties?

The 5 most important CR+ principles:

1. Check your fields individually.
2. First fungicide application is the most important one.
3. Divergent disease progression and spraying sequence in CR+ compared to current varieties.
4. The management goal is:
Green leaves until harvest.
5. Other diseases must be integrated in your management strategy.*

*extra spraying might be necessary



