



# Wild bees and butterflies for high-quality lettuce

*How can a growing area be more ecological during cultivation? Bayer Food Chain Partnership supported the German lettuce company BEHR AG in finding sensible and feasible solutions.*

With 2,500 hectares, Lower Saxony is the state that produces the most iceberg lettuce in Germany. BEHR AG, an international family business, is located near Hamburg. The company joined Bayer Food Chain Partnership in 2009 to find solutions for producing iceberg lettuce in a more sustainable way while also effectively fighting pests and diseases. The overall goal is of course to produce high-quality products for consumers.

## Tailored, integrated pest management program

Fungal diseases such as lettuce downy mildew and pests like aphids pose a major challenge for BEHR AG in their efforts to produce high-quality lettuce. "Infested heads are unmarketable and are unfortunately a great loss of revenue," explains Rudolf Behr, the company's chairman. Bayer Food Chain Partnership helped develop an integrated pest management program that combines various effective insecticides and fungicides as well as certain other measures to improve its ecological footprint.



## Enhanced biodiversity through flower strips

Flower strips were integrated to support the program. "The strips are a simple method to attract beneficial insects that biologically support our integrated pest management program," says Belinda-Giesen-Druse, ForwardFarming and Biodiversity Manager at the German sales organization of Bayer Crop Science. However, there were a few challenges that had to be overcome first. For instance, the strips need to be composed in such a way that they will not turn into a hub for pests and must fit in the workflow of the farm. "For us it was important that the flower strips do not interfere with our workflows.





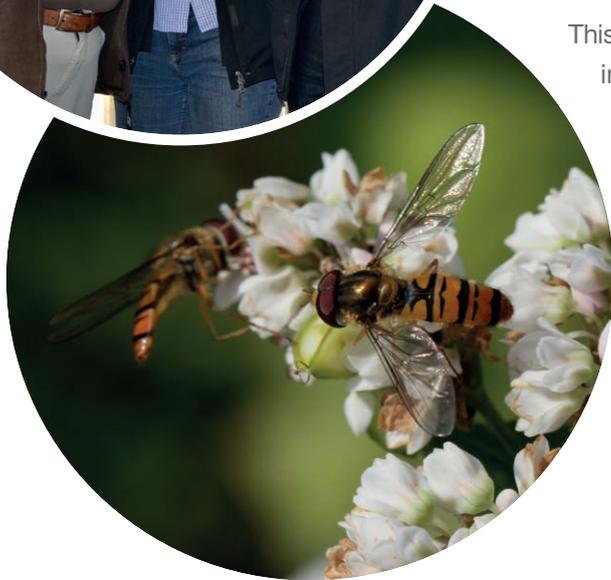
Iceberg lettuce is a labor-intensive crop that is harvested up to four times per season," says Behr.

In addition, Bayer offered training on application techniques and water protection to make sure that crop protection products do not affect the insects in the flowering strips.

## Increasing the number of beneficial insects



After one season, all participants were pleased with the excellent results. "It was clearly possible to increase the number of beneficial insects, such as wild bees or butterflies in the flower strips," Giesen-Druse summarizes. "This is a valuable contribution to biodiversity in agriculture. The results have been collected and confirmed by the independent biologist Dr. Jürgen Esser, Office for Field Ecology in Dormagen, Germany."



This goes to show that the Bayer Food Chain Partnership initiative has helped BEHR AG remain a pioneer in the lettuce-production sector. The goal – production of high-quality lettuce through sustainable means – was completely achieved. "Only the extensive involvement of all partners and the readiness to try different ways together made the success of the project possible," Giesen-Druse concludes.

### About BEHR AG

As an internationally active family business, BEHR AG is one of Germany's biggest lettuce producers. In addition to various types of lettuce, the company also grows a selection of different cabbage varieties. Their lettuce production operation in Germany is centered at their site in Ohlendorf, near Hamburg. Aspects of economically efficient and sustainably innovative measures receive equal attention during the production of lettuce. The company combines production, trade, and consulting under one roof, through their subsidiaries.





## Food Chain Partnership and BEHR AG

### The challenge:

Iceberg lettuce producer BEHR AG has to protect its produce against lettuce downy mildew and aphids, among others. Once infested, the heads are unmarketable. The lettuce producer also wants to increase biodiversity on its farmland.

### The solution:

Bayer supported the implementation of an integrated pest management program that includes insecticides and fungicides and several other measures to improve the environmental footprint. In order to increase the biodiversity level, they implemented flower strips at the edge of the fields to attract beneficial insects.

### The advantage:

Considering that iceberg lettuce is very labor-intensive, the flower strips could be well integrated in the workflows of BEHR AG. The biodiversity level was increased as many beneficial insects, such as wild bees and butterflies, were found in the flower strips. Thanks to the correct application of crop protection products in the lettuce fields, the flower strips and the insects living in them were unaffected. This has been confirmed by an independent field ecologist.

