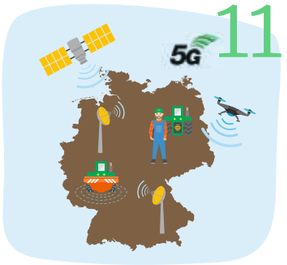
Digital infrastructure

Combining modern application techniques with digital solutions will result in an even more targeted and needs-based application of plant protection products and fertilisers. To be able to implement these solutions, however, farmers are entirely dependent on the nationwide availability of a fast mobile broadband network (5G standard). This includes a precise legal framework on the property and usage rights to the data.

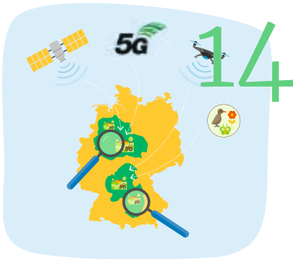


Digital decision-making tools

The agrochemical industry promotes the development of new processes and approaches in the application and implementation of digital tools that enable farmers to make a better-informed decision on the use of plant protection products, fertilisers and biostimulants.

Digitised documentation of application data

Standardised digital documentation of application data makes it easier for farmers to demonstrate their correct and appropriate use of plant protection products, fertilisers and biostimulants. The data ownership remains with the user.



Digital model regions

The digitalisation of agriculture requires extensive technological change, as well as greater acceptance and knowledge of the new possibilities. To achieve this, model regions should be established, where arable farms are being equipped with state-of-the-art technology and receiving intensive guidance from government agencies.

European harmonisation

To ensure that German crop farming is not disadvantaged compared with other regions of Europe, a level playing field is required concerning access to plant protection products, mineral fertilisers and biostimulants in Europe. This includes compliance with uniform assessment criteria and standards throughout the EU in the authorisation of plant protection products.

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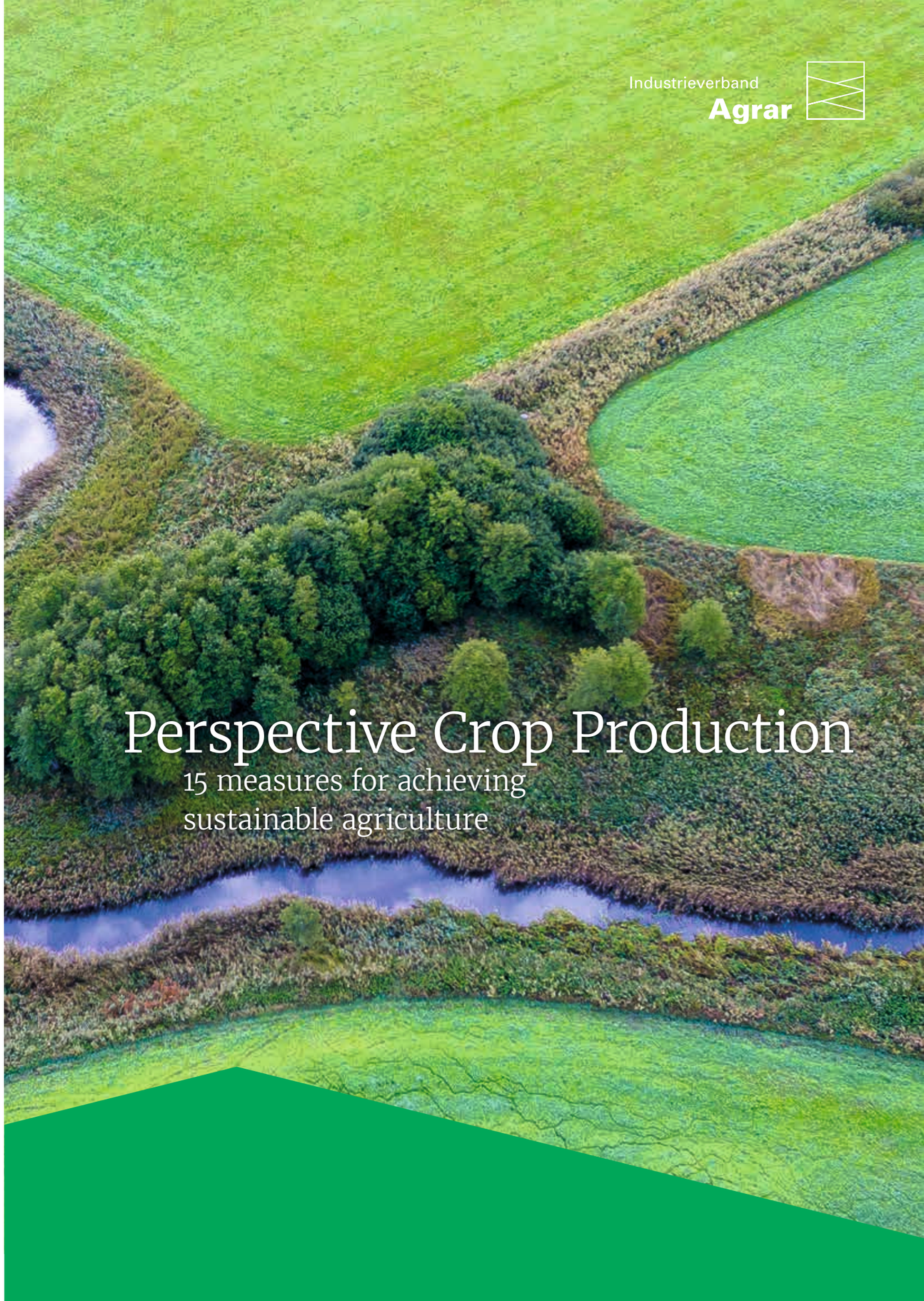

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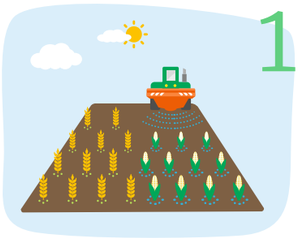
Perspective Crop Production

15 measures for achieving sustainable agriculture

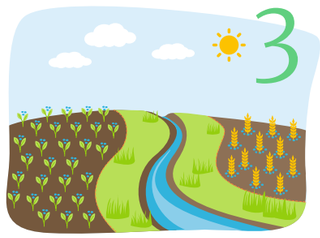
Mineral fertilisers, plant protection products, and the new product category of biostimulants play a key role in plant health and thus in maintaining and improving agricultural production. In the view of the Industrieverband Agrar (IVA), they will be indispensable for some time to come. Any future cropping strategy, such as the one currently being developed by the German Federal Government, must therefore show how these inputs can be used in a sustainable way, whilst further reducing the risks associated with their use.

An example of such a strategy is outlined in an IVA position paper entitled "Perspective Crop Production", which sets out proposals for 15 concrete measures. While some measures – such as sowing perennial flower strips to promote biodiversity or creating vegetated buffer strips – can be implemented quickly, other measures such as the concept of an ecological damage threshold need to be fleshed out or require a fundamental rethink, particularly concerning the use of plant protection products. The 15 measures are presented briefly in this leaflet. To download the full position paper, visit www.iva.de.



Most efficient nutrient source The excess of nutrients may result in the contamination of groundwater and surface water. Mineral fertilisers provide clearly defined nutrient concentrations and therefore are suitable for the targeted supply of nutrients to crop plants, as required. This helps to prevent unwanted nutrient losses.

5-metre riparian buffer strips A minimum distance of 5 metres should be kept between treated arable land and water bodies when applying plant protection products or fertilisers. This considerably reduces the risk of discharge to surface water via spray drift and runoff.

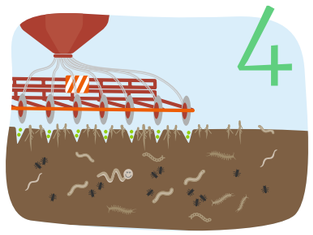


Vegetated field boundary strips

Implementing grass field boundary strips and grass filter strips along water bodies and within fields considerably reduces the risk of discharge to surface water (runoff). The extensive implementation of strips requires support from funding programmes (e.g. greening measures).

Conservation tillage

Non-plough tillage enhances the stability of arable land. Crop residues on the soil surface reduce soil erosion, decreasing the risk of nutrients and plant protection products entering water bodies. The implementation requires the availability of suitable plant protection products (especially herbicides).



Perennial flower strips

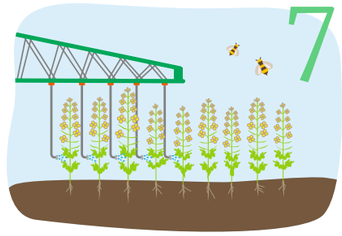
Loss of habitat and food sources is considered a crucial factor in the decline of insects. Creating perennial flower strips, ideally containing a variety of regional species, has a positive effect on the number of individuals and species.

Extended crop rotation

Short crop rotations and monoculture should be diversified by integrating crops that interrupt infection cycles and that are less susceptible to pests (e.g. rotating broad-leaf crops with cereals, integrating legumes or oats). The introduction of incentive programmes is needed to leverage sales opportunities for the crops included in the rotation, which is a political task.

Environmentally friendly application techniques

More precise application techniques will help to reduce any potential negative effects from the use of plant protection products and fertilisers. Examples include sensor technology, as well as new nozzle technology which enables accurate application (e.g. determination of biomass, drop-leg technology).



Ecological damage threshold

In Integrated Pest Management, the "economic damage threshold" is the basis for deciding to use chemical products (control only if the damage is higher than the cost of treatment). An ecological damage threshold would also bring the conservation and promotion of biodiversity into the equation, further optimising Integrated Pest Management and helping to minimise the number of treatments required.

Biodiversity: advice More space should be devoted in farming practice to promote biodiversity. But taking action to conserve and promote biodiversity entails additional effort and results in income losses for farmers. Official advisory services need to be expanded and improved so as to raise awareness of possible biological enhancement measures, to identify particularly suitable areas on the farm, and to show how such measures can be integrated into farming operations in an economically feasible way.

Biodiversity: subsidies When farmers make their land available for the conservation and promotion of biodiversity, this land becomes unavailable for the production of food, resulting in revenue losses. These services, provided for the good of society as a whole, cannot be borne by farmers alone. It is essential that more public funding is made available for the conservation and promotion of biodiversity.