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New digital tool from KWS determines the ideal planting density of corn

The new digital tool “Variable Rate Sowing” from KWS defines the ideal planting density for corn on the basis of specific field conditions. KWS combines satellite images delivering objective data with long-standing empirical values and variety-specific know-how. After all, not all varieties react alike to changes in the planting density.

The success of crop plants' growth depends on many factors, among them the composition of the soil, which has a significant influence on subsequent crop yields. Is the soil able to, for example, store water and release the water to plants? Is the soil rich in humus, deep and moist or does it tend to be dry? If a soil possesses optimum properties, it can nourish many plants and, consequently, more corn seeds can be planted per square meter. If the preconditions are not very good, a more limited planting density is recommended to ensure the best possible yield for the particular farmland. “Using our digital tool means single-seed corn planters can be programmed so they select a greater planting density for ideal soil conditions and then be adjusted if the soil is less than optimum,” says Fabian Böke, who heads digital tools for corn cultivation at KWS. “But what makes our system unique is that we augment the objective data with empirical values and our own knowledge about varieties.”

The European Space Agency's satellite system Sentinel 2 continuously delivers high-resolution images. Drawing on the satellite data, growth potential zones for each cultivated field can be determined and, as a result, the planting density can also be calculated depending on crop and type of soil. “The high level of automation actually makes it possible to quickly and precisely determine growth potential zones independently from the crop. To do this, farmers simply mark their fields in our myKWS portal. A little later, they see the result on their screens in the form of a growth zone map,” says Böke. The special expertise of KWS is, however, also incorporated into this growth zone map. As a plant breeding company with extensive knowledge about varieties, KWS has a lot of data on how a special variety reacts to changes in crop density. This know-how is also fed into the digital tool. Likewise, farmers can input their own empirical values as all maps can be easily edited. Böke: “If a farmer supplements the map with his or her knowledge, everything will become even more customized and that's exactly our goal: Planting and sowing recommendations that are tailored to each user. I think we've succeeded really well in doing just that with our digital tool “Variable Rate Sowing.” The tool is currently in the official pilot phase in Germany as well as in several countries in South East Europe and in Italy. Farmers can obtain information about site-specific planting and sowing in a section of the online portal myKWS. The KWS sales force is available for individual consultation on the topic.

You can find more information about the new digital tool at www.kws.de/vrs

About KWS*

KWS is one of the world's leading plant breeding companies. In the fiscal year 2018/19, more than 5,500 employees in 70 countries generated net sales of EUR 1.1 billion and earnings before interest and taxes (EBIT) of EUR 150 million. A company with a tradition of family ownership, KWS has operated independently for more than 160 years. It focuses on plant breeding and the production and sale of seed for corn, sugarbeet, cereals, rapeseed, sunflowers and vegetables. KWS uses leading-edge plant breeding methods to increase farmers' yields and to improve resistance to diseases, pests and abiotic stress. To that end, the company invested approximately EUR 200 million last fiscal year in research and development.

*All indications excluding the results from the companies accounted for using the equity method AGRELIANT GENETICS LLC, AGRELIANT GENETICS INC. and KENFENG – KWS SEEDS CO., LTD.

For more information: www.kws.com. Follow us on Twitter® at https://twitter.com/KWS_Group.

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