



Press Release

CropDesign's TraitMill delivers yield enhancement traits for cereal crops

GENT, BELGIUM, November 21, 2003 — CropDesign today announced that it has discovered several proprietary gene leads that result in spectacular yield enhancements in rice. Each of those gene leads consists in a modification of the expression of a single natural plant gene. Despite the relatively limited genetic modifications that have been introduced in those transgenic plants, the effects are spectacular, resulting in yield increases of over 50 %. The company will advance those leads in corn and rice with a view to deliver a broadly applicable trait with major commercial impact.

“Our company builds on the results of the genomics revolution. In the past few years plant science has generated a lot of data about plant genes and their function. What was lacking, however, is a system to determine how plant genes can best be modified in order to improve the agronomic performance of crop plants. We have developed over the last 3 years a unique technology platform, called TraitMill, that is based on rice. Rice is, together with other closely related cereal species such as wheat and corn, one of the world's most important crops. Our TraitMill platform allows us to test several hundred-gene modifications per year in rice using a sophisticated combination of plant handling robots and digital imaging technology. We are now uniquely positioned to translate that gain in knowledge derived from the genomics revolution into practically relevant traits that improve the performance of cereal crops such as rice, corn and wheat”, says Prof. Willem Broekaert, CropDesign's VP R&D.

Cereals represent over 50% of human caloric intake. However, in several cereal crops, conventional breeding is approaching a yield plateau and the possibility to continue to increase yield with traditional approaches is diminishing. At the same time, expanding the area of land under agriculture is no longer an option and drought and salinity present a growing threat to agriculture. Therefore new technology will be essential to drive the progress in productivity that is required to feed a growing global population.

According to Willem Broekaert, “The first leads generated by CropDesign's TraitMill pipeline demonstrate that we can, under a controlled environment, achieve a quantum leap in crop productivity of 50% or more. These GM traits now need to be introduced in elite rice germplasm and integrated in breeding programs so that products can be delivered to farmers in a 5 to 7 years time frame. Our trait leads will also be introduced in corn. We are confident that we will thus be able to make a strong impact in the world's largest seed market“.

Steve Linscombe, head rice breeder at Louisiana State University AgCenter comments: “Eventually, new genetic variation generated by means of GMO technology will become an equally important and commonly accepted way to improve crop performance as conventional plant breeding”.



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“We have therefore never hesitated to continue to focus on this technology even while Europe had effectively implemented a moratorium – now ended - on its commercial application;” says Karl-Peter Schlichting, the company’s CEO. “We have been able to capitalize on Europe’s strengths instead. The science base in plant biotechnology, support schemes for entrepreneurial high-tech companies, and a supportive financing environment focused on creation of real value. Our US competitors all chose to build their technology platforms in Arabidopsis, a model species that is easier and quicker to work with than rice but that delivers results that are much further away from application in the cereals. Our deliberate choice to build our platform in a cereal crop is now starting to pay off for our company as we are entering in discussions with seed companies across the globe who are eager to use the gene leads that we have discovered”.

CropDesign uses its rice TraitMill applied genomics platform to discover traits for the improvement of corn, rice and other cereal crops in both in-house and partnered programs. The company’s proprietary lead pipeline is focused on enhancing yield and improving tolerance to salt and drought.

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