



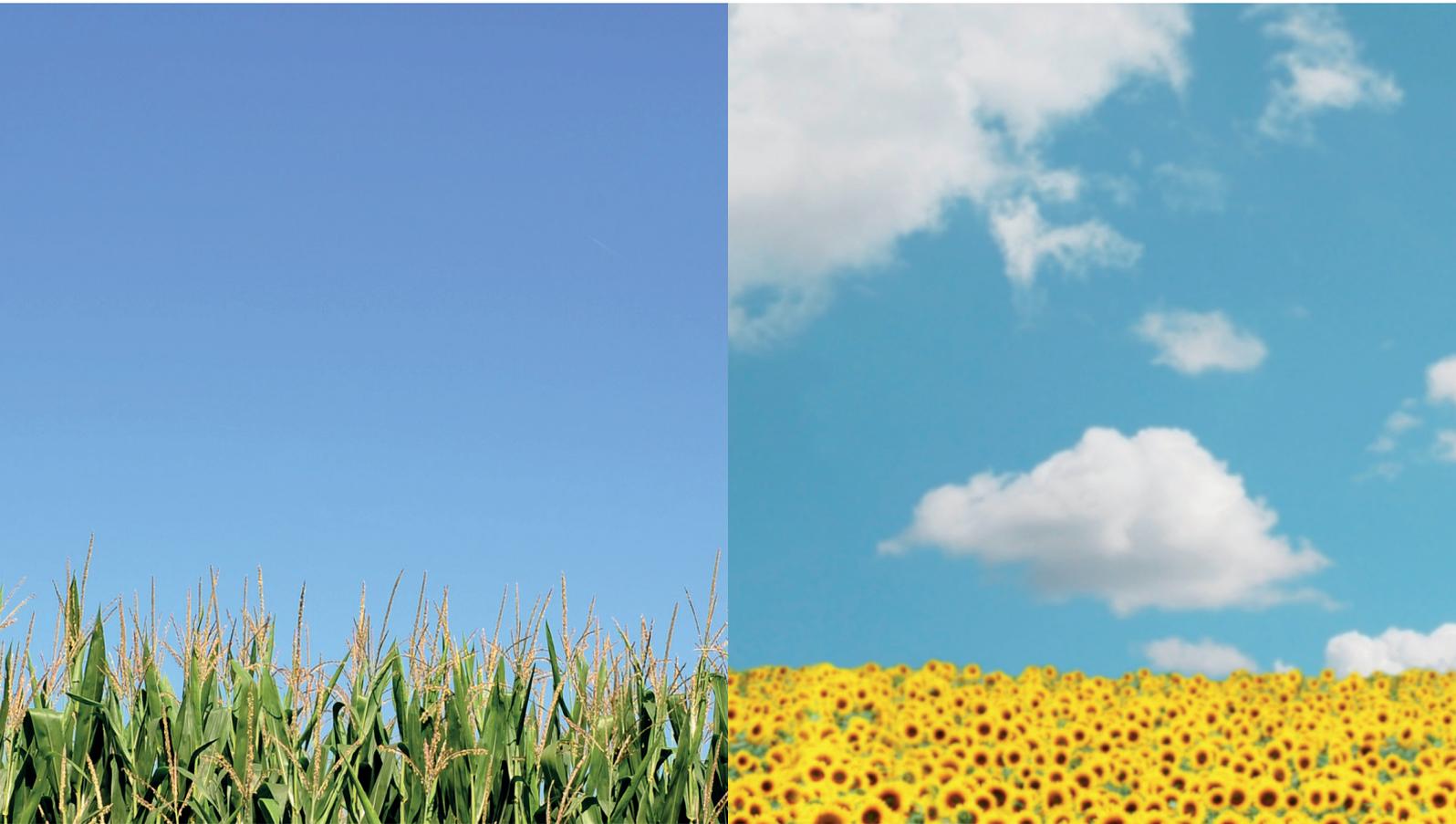
incotec

the seed enhancement company

Part of Croda International Plc

# UniSNP™ in field crops enables high-quality seed production

Superior technology for variety ID, quality control and parental homogenization



Confirming the correct variety and determining the amount of female selfing (inbreds) is an elementary and routine part of high-quality seed production. The selection of homozygous plants allows you to increase breeding and improve quality. Single Nucleotide Polymorphism markers (SNPs) is the most advanced technology available for this.

From varieties supplied by customers, KeyGene and Incotec have identified 48 highly polymorphic SNP markers from a global germplasm and a subset of 16 SNP markers used for quality control. This UniSNPTM is one of a kind and is already available for corn and sunflower. Incotec provides this rock-solid technique at an affordable price.





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## Universally applicable

- Reliable variety identification: the selected set is large enough to distinguish between an unlimited number of varieties giving certainty on each seed lot's identity
- Hybrid purity testing. selected SNPs from this set - identified for each specific variety – will be used to perform hybrid purity testing whereby both inbreds and off-types can be identified
- Open pollinated purity testing: validates the identity and quality of OP productions using the 16 SNP set
- Purifying parental lines: save years of work by cutting out several generations. This can be done by searching for homozygous positions and disregarding heterozygous ones to generate homogeneous parental lines
- Selection of homozygous plants: for backcrossing or other kinds of breeding

## Unique SNPs

There are three factors that make UniSNP™ unique:

- How the development of the SNPs is organized
- KeyGene's SNPs
- The software models used to select the most useful markers

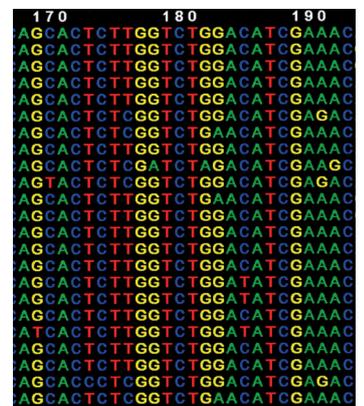
## United effort: customers, KeyGene and Incotec

To develop SNP markers effective on a worldwide germplasm, a huge set of SNPs had to be tested and validated on varieties from all over the world. Our customers supplied the many different varieties that represent a wide genetic germplasm. KeyGene identified potential SNPs that might work whether the background is closely related or very diverse. Incotec has been guiding this process, developing methods to extract DNA efficiently from seed and leaf material and has control over lab analyses. The final selection of the 48 and 16 SNP sets was carried out by KeyGene.

## Shipping made easy

Our lab has been accredited the Exemption 2008/61/EG status, which means that no phytosanitary certificates are required. We will provide shipping instructions.

For more information on our services and pricing email [IAL\\_analyticalservices@incotec.com](mailto:IAL_analyticalservices@incotec.com).



SNP	SNP 11	SNP 15	SNP 23	SNP 31	SNP 44	SNP 55	SNP 61	SNP 71	SNP 81	SNP 83	SNP 92	SNP 93	SNP 113	SNP 115	SNP 221
Hybrid 01 F1	A	T	A	A	A	A	A	A	A	A	A	A	A	A	A
Hybrid 02 F1	A	T	A	A	A	A	A	A	A	A	A	A	A	A	A
Hybrid 03 F1	A	T	A	A	A	A	A	A	A	A	A	A	A	A	A
Open Pollinated 01	A	T	A	A	A	A	A	A	A	A	A	A	A	A	A
Open Pollinated 02	A	T	A	A	A	A	A	A	A	A	A	A	A	A	A
Open Pollinated 03	A	T	A	A	A	A	A	A	A	A	A	A	A	A	A
Open Pollinated 04	A	T	A	A	A	A	A	A	A	A	A	A	A	A	A