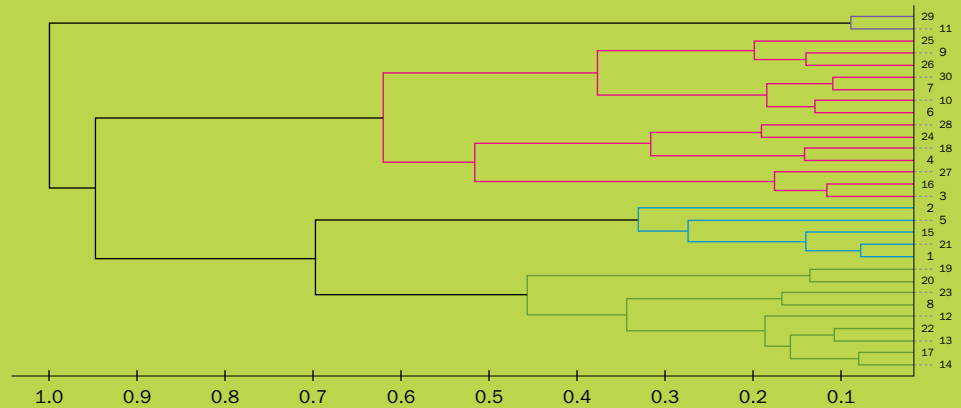


## DNA Fingerprinting

DNA fingerprinting helps you protect your valuable intellectual property (IP). We fingerprint proprietary crops, fruits, flowers and vegetables using a variety of molecular markers. That same DNA fingerprinting data can be used to create dendrograms to understand kinship relations in breeding material.



Dendrogram representing relationships between breeding lines

## Genetic Purity

The success of hybrid seed production is largely dependent on the genetic purity of parental lines. Out-crossing and the inadvertent mixing of seeds may compromise your seed quality. BDI provides molecular markers support to confirm the genetic identity of your seed material.

	SNP1	SNP2	SNP3	SNP4	SNP5	SNP6	SNP7	SNP8	
Parent 1	A/A	GG	T/T	T/T	A/A	G/G	A/A	G/G	
Parent 2	C/C	A/A	G/G	C/C	T/T	C/C	C/C	T/T	
Individual 1	A/C	G/A	T/G	T/C	A/T	G/C	A/C	G/T	
Individual 2	A/C	G/A	T/G	T/C	A/T	G/C	A/C	G/T	
Individual 3	A/C	G/A	T/G	T/C	A/T	G/A	A/C	G/A	← Outcrossing
Individual 4	A/C	G/A	T/G	T/C	A/T	G/C	A/C	G/T	
Individual 5	A/C	G/A	T/G	T/C	A/T	G/C	A/C	G/T	
Individual 6	A/C	G/A	T/G	T/C	A/T	G/C	A/C	G/T	
Individual 7	A/A	G/G	G/G	T/T	A/A	G/G	A/A	G/G	
Individual 8	A/A	G/G	G/G	T/T	A/A	G/G	C/C	G/G	→ Selfing
Individual 9	A/C	G/A	T/G	T/C	A/T	G/C	A/C	G/T	
Individual 10	A/C	G/A	T/G	T/C	A/T	G/C	A/C	G/T	
Individual ...	A/C	G/A	T/G	T/C	A/T	G/C	A/C	G/T	
Individual ...	A/C	G/A	T/G	T/C	A/T	G/C	A/C	G/T	
Individual ...	A/C	G/A	T/G	T/C	A/T	G/C	A/C	G/T	
Individual N	A/C	G/A	T/G	T/C	A/T	G/C	A/C	G/T	

Genetic purity analysis using SNP markers

