

DNA sequencing of 100 melon varieties could lead to improved taste, shelf life

Smart new combinations of state-of-the-art molecular techniques mean that breeding programmes can be accelerated dramatically: it may soon take only two years instead of the current five or ten to develop a new variety. DNA sequencing data can already be associated directly with important hereditary traits such as disease resistance, taste and shelf life.

“Without this level of understanding breeding programmes have been time-consuming and not very specific,” says Dr Sander Peters, bio-informatics scientist at Wageningen UR. “By properly analysing the information from the sequence data, breeders can now carry out much more focused searches for desired properties and create far more focused combinations of breeding parents. This knowledge is worth a great deal and we’re currently working on melons together with private sector companies.”

100 Melon Genome project

Peters leads the new 100 Melon Genome project, in which Wageningen UR is already cooperating with five breeding companies, including East-West Seed from Thailand. The coordinator of the project is Dr Rob Dirks from Rijk Zwaan Breeding BV. Professor Hans de Jong of Wageningen University contributes the genetic expertise, while Willem van Dooijeweert of the Centre for Genetic Resources (CGN) provides the melon collection. Together, the participants will unlock the genomes of one hundred melon varieties and five wild relatives. The project is a successor to the highly successful 150 Tomato Genome Sequencing project, but with new innovations at its disposal.

Read full, original article: [Faster melon breeding thanks to smart combination of techniques](#)