

Research & Technology Centre



Research into new technologies, cooperation with an extensive network of knowledge partners, developing tools for breeding programs. And so much more...

The Hendrix Genetics Research & Technology Centre (RTC) operates in Research and Development and in Information Technology for the layer, turkey, traditional poultry, pig and salmon breeding divisions of Hendrix Genetics. The Centre initiates and runs projects in the development of new technologies within the Hendrix Genetics divisions. It cooperates with partners and alliances, and connects with a comprehensive science network and protects intellectual property. The RTC supports geneticists with automatic data entry, breeding programs in extensive on-line databases and centralized storage of DNA samples in the BioBank, to ensure reliable genetic selections and meaningful analysis.

Genetics: a new world of breeding

Continuous genetic improvement is the objective of all breeding programs for livestock species and genetics is the science that is the basis for selection programs. Input for the selection programs consists of predictions of the genetics value that the breeding candidates pass on to their offspring. RTC scientists work on projects based on mathematical genetics to further improve the way by which multiple measurements on millions of breeding candidates are scientifically turned into these predictions.

RTC now tests breeder candidates for over 60,000 SNP markers and uses bio-informatics to translate massive amounts of laboratory results of DNA testing into predictions of genetic value.

Data Entry

Data from breeders and breeder candidates are uploaded to databases. All data is entered on-line in the central database after automated meticulous checking for errors. All data entry is carried out automatically: either through handheld computers or through interfacing with measuring equipment. This ranges from pig or poultry feeding stations and weighing scales to various apparatus that measure product quality such as shell thickness of hen's eggs or muscle depth of pigs.

Besides that, interfacing with sow management systems is carried out worldwide to connect clients that are using the BioHypor system. Information management engineers ensure that both hardware and software for data entry are up to the highest standards. Continuously, we add new functionalities as breeding programs evolve.

Breeding Databases

We store individual pedigree and performance data of millions of animals in the Hendrix Genetics breeding programs in large databases. These are available on-line at all nucleus farm and office locations of the breeding divisions throughout the world. The geneticists use among other tools, information from the databases to carry out genetic selections of breeding stock. RTC software engineers ensure - through almost continuous re-design and upgrading- that the geneticists of all divisions can enjoy the newest features and functionalities in database technology.

Strong in-house research

In addition to own projects and research within the company, many RTC projects are executed in close cooperation with universities and other academic institutions worldwide. The involvement of external experts ensures that in-house knowledge and expertise are fully up to date. The network of contacts with academics around the globe ensures that new ideas and technologies quickly find their way into breeding programs. RTC also hosts trainees: promising graduates who train for a maximum of two years at various Hendrix Genetics locations around the world to become the future international experts in our company.

Biobank: DNA repository of all breeding animals

Blood or tissue samples of all breeding stock are stored centrally in the Biobank of the Hendrix Genetics Genomics Laboratory. Samples are bar-coded and robots are used to exclude human error when processing thousands of samples for genotyping. The persistent and centralized

storage of samples that span multiple farms and generations provides a structured sample collection across time and space that can be used for meaningful analysis of the molecular data.