



Technology at a Glance

DNA sequencing technology is used to determine the nucleotide sequence of genes or regions of the genome important for trait improvement. Gene sequencing data allows our researchers to understand the function of specific genes and helps us improve plant breeding and product development systems.

- Projected Introduction: The first commercial products developed with this technology will be available in the next two years
- Technology Location: North America, South America, Asia, Europe
- Crops: Corn, Soybeans, Canola, Rice
- Technology Use: Gene Identification

Technology Leader

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Unique Sequencing Applications

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Versatility in Crops

Anticipating Needs

As global food, feed, fuel and fiber consumption continues to increase, we must look for ways to enhance grain production to meet these growing demands. Pioneer is constantly looking for methods to enhance productivity and bring the best products to customers faster.

Pioneer will be able to create and commercialize superior products faster by selecting the best possible traits for yield and disease resistance. Gene sequencing makes this trait selection much more accurate, as researchers know exactly where select traits reside within the germplasm.

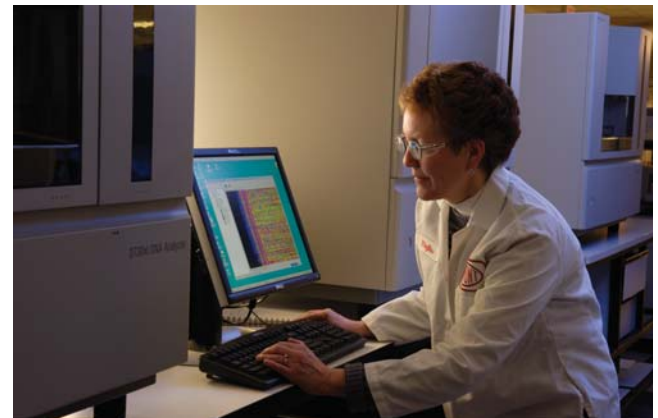
Delivering Solutions

The application of gene sequencing technology to native trait discovery is in active use at Pioneer. Not only does the technology identify gene sequences, it is also used to create dense genetic maps that help us understand precisely where a specific gene or trait is located, the amount of genetic diversity that exists for that specific gene or trait, and to develop DNA-based diagnostic markers for that trait for use in the breeding programs.

The recent addition of novel, low-cost, ultra-high throughput sequencing platforms has expanded the scope and applications of this technology in whole-genome mapping of markers for specific breeding programs.

Delivering Value

Gene sequencing significantly speeds up the identification process and will reduce the overall amount of time required to bring new products to market.



DNA Sequencer in the DuPont Experimental Station Sequencing laboratory



AYT™ system technology