

Blue Sun Scientific's NIR solutions include the Phoenix Sideloader with Autosampler for high throughput forage laboratories and seed breeders as well as the Phoenix Top Window for universities and nutritionists.

Many forage laboratories have an extremely high throughput, often running thousands of samples each year. The Phoenix Sideloader with Autosampler was specifically designed for these high throughput forage labs.



Calibration Partners

Blue Sun Scientific has multiple forage calibration partners, many of whom provide calibration services to satellite forage laboratories around the world:



Each of our calibration partners has spent years of NIR and wet chemistry analysis building their databases. Many laboratories interested in NIR may already have a preferred provider, and Blue Sun Scientific is well suited to offer them their preference.

Other labs may have spent their own time and money developing their own calibrations. The Phoenix's flexible calibration options, allows them to continue using these databases on the Phoenix.

Example: A forage lab start-up was paying \$15 per scan to their calibration provider and charging \$35-\$40 per scan to their customers. In a year they were averaging 1,000 samples a month, which resulted in them making more than \$250k per year!

A Record of Success



According to Dairyland Laboratories LLC, one of the largest commercial forage laboratories in the world:

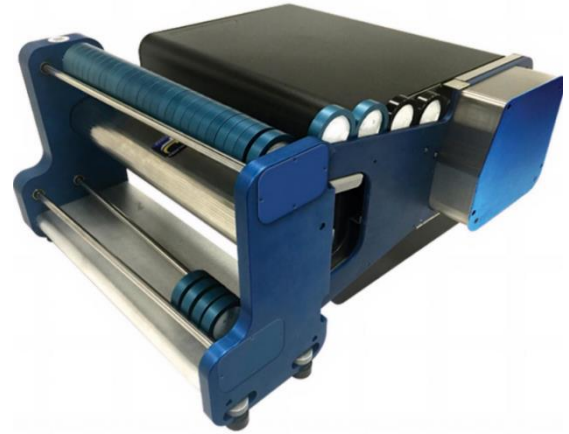
"One of our strategies for continued growth at Dairyland is continuously improving the efficiency of our processes. The Phoenix 5000-SL with 30-cup autosampler is the instrument that best helps us continue to make progress towards that goal in our NIR division..."

...It now takes one technician to operate an instrument without downtime where it used to take two. It is important for us to eliminate instrument downtime because some of our locations may have to scan over a thousand samples in a day. Each instrument that we have added eliminates one FTE, and that is a huge win for us."

*Phillip Goldblatt
NIR Programs Manager, Dairyland Laboratories, Inc.*

Automating Forage Analysis

The Phoenix Sideloader with Autosampler has the flexibility to streamline laboratory NIR workflows while reducing operator time and improving throughput. The Phoenix Sideloader with autosampler can replace up to two top window NIR systems and two operators.



Analysis with a traditional NIR instrument without an autosampler required an NIR operator to manage samples all day long. This type of analysis typically required 2-3 minutes per sample. The Phoenix Sideloader with Autosampler automates many sample handling steps and reduces analysis time to about 30 seconds per sample.

The Phoenix Autosampler's RFID system solves many of the issues of traditional NIR autosamplers by eliminating the need to track the order of samples or to follow worklists. The Phoenix Sideloader's autosampler system allows all sample information to be preprogrammed into RFID tags and analysis to be performed in batches of 30-50 or continuously by adding sample cups to the autosampler.

Automating Forage Analysis Savings

An American forage laboratory had been utilizing 4 benchtop top window NIR instruments which required 4 NIR operators in constant attendance. They were able to replace their NIR operation with 2 Phoenix Sideloaders with Autosamplers and slightly improved their throughput.

Their laboratory improved its efficiency as these operators were reassigned to help with other testing procedures around the lab. They also saved a substantial sum on instruments as they were able to achieve with 2 Phoenix Sideloaders, what had typically required 4 top window NIR instrument.

	Traditional NIR Top Windows	Phoenix Sideloader with Autosampler
# of Instruments	4	2
Instrument Cost	\$65k each	\$65k each
Total Instrument Cost	\$260k	\$130k
# of Operators	5	2
Operator Cost	\$45k / year	\$45k / year
Total Operator Cost	\$225k / year	\$90k / year
Total Cost	\$260k + \$225k / year	\$130k + 90k / year

This resulted in a savings of \$130k on NIR instruments and an additional \$135k per year in NIR operator costs! As an added bonus, they reduced their service and support costs by half each year.