New Surge HG alfalfa variety boosts milk production

Improved forage quality has the potential to increase milk production by 2.5 pounds per cow per day.

A new alfalfa variety from BrettYoung Seeds is pumping up milk production. Surge HG alfalfa was developed with the goal of improving forage quality while maintaining strong agronomic traits and yield. Using conventional breeding techniques that are non-transgenic, breeders were able to develop a lower fibre and high protein alfalfa suited for Western Canadian dairy producers.

"For dairy producers, improving alfalfa quality means producing more from the same land base. Surge HG has improved Relative Forage Quality that results in more milk per cow," says Erik Dyck, Forage and Turf Product Manager with BrettYoung Seeds at Winnipeg, Manitoba.

Improvements in forage quality and milk production come from focusing on several key forage traits. Breeders focused on improving fibre digestibility and an increased rate of and extent of fibre digestion when developing Surge HG.

The breeding process also selected for plants with finer stems and a leafy, dense canopy with a high concentration of leaves in the lower plant canopy. These plant traits also help improve fibre digestibility and crude protein content*.

Competitor

Surge HG
Fine stems and leafy

"With improved fibre digestibility and three to five per cent higher crude protein, that results in 12 to 20 pounds more protein per tonne of alfalfa," says Dyck. "That translates into the potential for 2.5 or more pounds of milk per cow per day – a significant improvement in feed efficiency and milk production for dairy producers."

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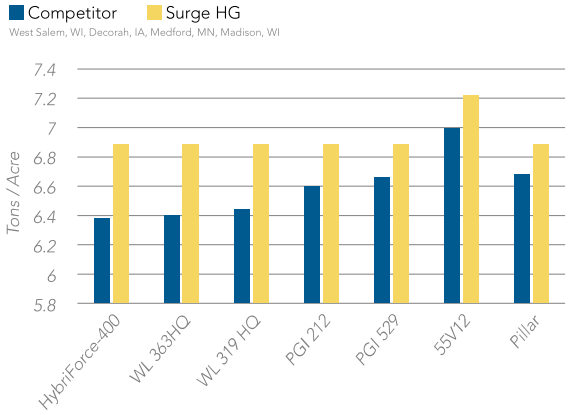
Of course, yield is also a key component of forage production. In head-to-head trials against commercial check varieties in Wisconsin, Iowa, and Minnesota, Surge HG had the highest yields.

"Yield is definitely part of the equation. Dairy producers aren't giving up any yield in exchange for improved forage quality. Surge HG has both," says Rene Mabon, BrettYoung's Agronomic and Regulatory Services Manager.

HEAD TO HEAD DRY MATTER YIELD



Research also supports Surge HG's improved forage quality. In replicated trials, Surge HG was compared to three commercial check varieties at West Salem, Wisconsin in 2016. Forage quality was reported as a percentage of the mean of the commercial check varieties. Surge HG scored higher in crude protein, relative forage quality and milk production per acre. Surge HG also had a lower percentage of undigested neutral detergent fibre after 240 hours (UNDF240) – indicating improved fibre digestibility.

"The newer forage tests that measure undigested neutral detergent fibre after 240 hours and relative forage quality reflect fibre digestibility better than some of the older tests like relative feed value (RFV), neutral detergent fibre (NDF), and total digestible nutrients (TDN). Relative forage quality takes fibre digestibility into account and it has a direct correlation to the relative amount of milk produced per acre," explains Dyck.

FORAGE QUALITY HEAD TO HEAD PERFORMANCE VERSUS CONVENTIONAL VARIETIES[1]

Variety	Crude Protein	UNDF420[2]	Relative Forage Quality (RFQ)	Milk/ Acre
Surge HG	106%	86%	108%	105%
54Q14	101%	99%	102%	103%
55Q27	99%	104%	99%	101%
LegenDairy XHD	101%	97%	98%	96%

Two cut weighted mean during crop year 2016. Three replications per variety.

FLEXIBLE MANAGEMENT OPTIONS

Surge HG will easily fit into your alfalfa management system. The variety has flexibility to adjust to aggressive harvest systems to maximize yield and quality or to more relaxed schedules focused on tonnage. Either way, growers put the odds of improved returns per acre and animal performance in their favour.

"For dairy producers, alfalfa production is about quality, and Surge HG maintains that quality through a wider harvest window," says Dyck.

Surge HG will be available for the 2019 growing season through BrettYoung Seeds retailers.

CANADA BEST MANAGED COMPANIES

BrettYoung™ DISTINCT BY DESIGN

[1]The increased rate of fibre digestion, extent of digestion, and crude protein data was developed from replicated research and on-farm testing. During the 2015 growing season at West Salem, WI and Woodland, CA, the following commercial dormant, semi-dormant and non-dormant alfalfa varieties were compared head-to-head with Hi-Gest® alfalfa for rate of digestion, extent of digestion and percent crude protein; America's Alfalfa Brand Ameristand 427TQ, Cropland Brands Legendairy XHD and Artesia Sunrise, Fertizona Brand Fertilac, S&W Seeds Brands SW6330, SW7410 and SW10, and WL Brands WL 319HQ and WL 354HQ. Also during the 2015 growing season, 32 on-farm Hi-Gest hay and silage samples were submitted to Rock River Laboratory, Inc. for forage analysis. The results for rate of digestion, extent of digestion and percent crude protein were averaged and compared to the 60 day and four year running averages for alfalfa in the Rock River database which included approximately 1,700 alfalfa hay and 3,800 silage 60 day test results and 23,000 hay and 62,000 silage tests results in the four year average. [1]Forage quality is presented as a percentage of the mean of the commercial check varieties 54Q14, 55Q27 and LegenDairy XHD. [2]UNDF240 is the amount of undigested neutral detergent fibre after 240 hours. The lower the percentage, the better the score. 3792 11.18