

The Warner's - Quietly Proud – Three Time Master Breeder

Paul Wight, CCA, PICKSEED Ontario Sales Manager

Sales Agent Don Burgomaster and I, are visiting with Dean and Wayne Warner of RONBETH Holsteins. The Warner's are just one farm family of 15 in Canada to have earned the Master Breeder Award three times.



l to r: Dean, Ron, Don Burgomaster (PICKSEED sales agent), Wayne

The Warner families have farmed in Asphodel Township in the county of Peterborough since 1867. Gordon Warner married Annie Sargent of Westwood and they farmed his father's farm. They had two children Ronald and Elizabeth hence the farm prefix RONBETH. Gordon started into registered Holsteins in 1939. In 1951 Ron with his wife Mary became the sole owner and in 1979 they earned a Master Breeder Shield. The Master Breeder Shield was earned again in 1993 and 2006 by Ron and Mary's sons Dean and Wayne.

Dean returned home in 1978 after working for Agriculture Canada for two years. In 1981 Wayne returned to the farm after five years at the Royal Winter Fair. He married Anne Callaghan of Lindsay in 1983. Dean married Carol Lacey of Peterborough in 1985. They have two girls Lacey and Stephanie. I would like to make a side note; Stephanie has participated and

placed as a winner in the Ontario Forage Masters Competition, the sponsors of which are PICKSEED, The Ontario Soil and Crop Improvement Association and Agri-Food Laboratories.

RONBETH Holsteins is based on three cow families. The "Bonnies", the "Burkes" and the "Berthas" The "Bonnie" and "Burke" families trace back to the original foundation animals. The "Bertha" family began in 1958 with the purchase of a calf by Ron. This calf was mated to Roybrook Telstar (Ex-Extra) to produce RONBETH Telstar Bertha who became their first Excellent cow.

The current herd is 23 EX 22Vg 8 GP with production averaging over 9500kg with 4.2% butterfat and 3.3% protein. Their list of achievements as Holstein breeders are 2 Canadian Champion Lifetime records, more than 10 cows over 100,000kg milk lifetime, 1 Class Extra sire and 3 superior

type sires plus All Canadian, All American and All Ontario animals. We congratulate the Warner family on their achievements.

Wayne and Dean explained they "feed for milk production and breed for type". Their crop acreage consists of 150 acres of the original farm, they own an additional 75 acres and they rent another 200 acres. Their cropping consists of alfalfa timothy (85:15) and an additional 2-3 pounds of brome grass. They also plant 50 acres of barley for a rotation and for the straw. Some of the PICKSEED varieties they grow are PS2065MF, Starbuck and they will be seeding Leader alfalfa in 2008. They underseed the barley to their hay mixture. The hay is cut 2-3 times per year and the stands are left in for 6-8 years. Wayne and Dean harvest 700 big square bales as baleage, 10,000 small squares of dry hay and 150 round bales that they feed outside. They purchase 75 tons of dry shelled corn. Don Burgomaster has commented that "the Warner's are always asking what PICKSEED has new, and their purchases have always been with our leading edge alfalfas".

continued on Page 3

INSIDE

Alfalfa Forage Quality	2
2008 - U.N. year of the Potato.	2
Establishing Alfalfa	3
Tribute to Norman Borlaug	4

Alfalfa Forage Quality – Making More Milk

- The Value is There

Jay Hackney, PICKSEED Vice President Research & Product Development

It's about Digestibility, not Protein

A one unit increase in forage fibre digestibility (NDFD – Neutral Detergent Fibre Digestibility) makes for 0.037 lb (0.017 kg) more Dry Matter Intake (DMI) and a corresponding 0.55 lb (0.25 kg) per day increase in 4% fat corrected milk yield. This is the conclusion of a Michigan State University study¹. This study represents the results of a review of the literature on the relationship of NDFD for various forages and Milk production and so tends to be conservative. The increased profit easily covers the cost of seed of a high performance variety and more. The researchers conclude that “there can be a dramatic increase in milk yield from forage with enhanced NDFD”.

If we ask what the effect is of improved NDFD specifically in alfalfa, the attached Table 1 from research by Randy Shaver at the University of Wisconsin² shows the potential impact of improved NDFD alfalfa on milk production. The impact is dramatic.

Table 1. Impact of Alfalfa Quality on Estimated Milk per Ton and per acre					
CP%, NDF%	NDND (% of NDF)	Milk lb/Ton DM	Milk \$/Ton DM	difference lb/Ton	lb/point NDFD/Ton DM
22,40	60	3057	978	302	30
22,40	50	2755	882	315	32
22,40	40	2440	781		
16,50	60	2697	863	355	36
16,50	50	2342	749	369	37
16,50	40	1973	631		
Calculated using Milk200 model from U. Wisconsin					
Use \$70/hectolitre milk price					

The first conclusion is that forage rated 22, 40, 60 (protein, NDF, NDFD) compared

to 22, 40, 50 forage produces 302 more pounds of milk per ton of alfalfa grown, equivalent to \$96.64 more per ton (assuming \$70 per hectolitre milk price). Since there is a difference of 10 points of NDFD between the two samples, this equates to an advantage of \$9.66 per point of NDFD per ton of forage.

With a yield of 10 tons per acre, the producer can expect an improved forage quality alfalfa variety to be worth \$96.60 per acre per point of NDFD advantage. You will note that the model predicts an increasing advantage to higher NDFD alfalfa in poorer quality (low CP and NDF) forage. For instance, if you harvest later (producing lower quality forage), the advantage of improved NDFD is greater, up to 37 pounds milk per point of NDFD per ton of forage or \$117.34 per acre per point of NDFD advantage.

Purchasing a superior, improved quality alfalfa variety means you are buying better animal performance, and better animal health. Feeding high quality forage means you can feed less concentrate, and that can translate to lower risk of acidosis and a better milk fat percentage.

Research on how farmers choose alfalfa varieties shows us that yield, persistence and forage quality are the key features growers want. Yield and persistence continue to improve steadily with newer alfalfa varieties,

and because forage quality can have a direct impact on production performance

(either milk or beef) this remains a key factor. You can also look at data on potential Milk yield per acre in order to choose an alfalfa variety that will provide the performance you need.

An interesting story on quality is emerging... and we haven't talked at all about protein. We know that alfalfa is the least expensive way to produce protein on farm, and we used to think that it was protein we were producing when we grew alfalfa. That's changed significantly with the new improved forage quality alfalfa varieties and our improved ability to measure forage quality.

We've changed how we measure forage quality for the better. NDFD is a much better way to estimate forage digestibility than ADF (Acid Detergent Fibre). Dan Undersander of the University of Wisconsin says that “with the old way of measuring, using ADF, we were right in our ability to estimate digestibility and predict milk yield about 60% of the time. Do we want to be wrong 40% of the time? No – not when we can be more than 90% accurate with NDFD”. The reason NDFD is so much more accurate is that it is obtained by fermenting the forage sample in a fistulated cow or in a rumen fermentation chamber using actual rumen fluid.

This emphasis on digestibility is changing the way we look at alfalfa-based forages. “We're not after more protein in the alfalfa, but improving fibre digestibility makes sense”.

1. Mike Allen and Masahito Oba. 2006. Michigan Dairy Review. Vol 4(5)
 2. R.D. Shaver. 2007. Practical Application of New Forage Quality Tests. University of Wisconsin-Extension

2008 – The United Nations' Year of the Potato

The potato is the world's #1 non-grain food; it is the world's #4 food crop and is now increasingly being grown in underdeveloped countries where it presents a number of key advantages. Not the least of these is that since it is not a commodity crop like wheat or rice, its price is controlled locally, not by world markets. It is therefore a crop that can buffer against the type of situation we see developing now – where grain prices (wheat, corn, etc.) increase as a result in part of developed countries demand for biofuel, making food less affordable to

much of the developing world.

It is a crop suited to regions where land is limited and labour abundant and it produces more nutritious food more quickly and on less land and in harsher climates than any other major crop. Nutritionally, potatoes are rich in carbohydrates, i.e. they are a good source of energy. They have the highest protein content of the root crops and are rich in vitamin C.

It is expected that world population will grow by more than 100 million per year

(think of three times the Canadian population) over the next twenty years, with more than 95% of that growth in developing countries. A key challenge is to ensure food security for the present and the future in areas where pressure on land and water is intense. The UN wishes to focus attention on the potato this year in order to “promote development of sustainable potato-based systems that enhance the well-being of producers and consumers and help realize the potato's full potential as a “food of the future””.

Establishing Alfalfa

Matt Anderson, PICKSEED Research Associate

Profitable forage production begins with a well-established, properly managed, dense alfalfa stand. Factors such as soil type, fertility, weed control, variety selection and seedbed preparation can all have a major impact on your establishment. Below are some steps to follow when seeding alfalfa.

Select a suitable seedbed:

Alfalfa is best suited to deep, well drained loam, silt loam or clay loam soils with minimal slope and a soil pH between 6.7 and 6.9. Extremely wet soils provide a good environment for diseases that will reduce overall yields and may even kill new seedlings and established plants. A field with improper soil drainage will slow the movement of oxygen in the soil, which is required by the roots. Improper surface drainage, possibly due to sloping areas of the field, can create crusting and ponding which reduces soil aeration and increases the likelihood of winterkill. Also, the soil should be deep enough to maximize its water holding capacity. Alfalfa has a large taproot that extends further into the soil than most other shallow rooted crops such as corn; this is why alfalfa has extremely good drought tolerance.

Test fertility and soil pH:

Soil samples should be taken to determine the levels of nutrients available in

the soil. Most soil testing labs will make recommendations for applying primary (N, P, K) and secondary nutrients (S, Ca, Mg etc.) or lime. Proper soil fertility promotes good establishment, increases yield and quality, and improves persistence, winter hardiness, disease and insect resistance.

Variety Selection:

Alfalfa varieties are continuously being improved for factors such as higher yield, improved disease resistance, improved forage quality, persistence and winterhardiness. To select the variety that is right for you; you should look for head-to-head variety comparison data and look at as many of these factors that you can over the same harvest years and locations that are in a similar environment to your own. Be sure to purchase Certified seed of your selected variety and make sure it is pre-inoculated, with nitrogen fixing bacteria products such as Nitragin® Gold, and pre-treated with fungicides such as Apron® XL for disease protection.

Planting:

Seeding alfalfa can begin in the spring as soon as the potential for frost damage has passed. Spring seedings are preferred to late summer seedings because there is typically less weed competition and moisture stress during germination. Field preparation should begin the year

prior to seeding. Perennial weeds can be very dominant in the seeding year and following production years. Weed control in the fall before seeding will help to provide a well-established, thick alfalfa stand. Tillage practices vary from farm to farm, but typically primary tillage in the fall with a moldboard plow or chisel followed by disking is recommended. This helps loosen up the soil and reduces perennial weed pressure. Secondary tillage should then follow with a light cultivation and levelling of the soil. Ideally, the seedbed for alfalfa should be clod-free, smooth and firm (you should sink no more than ¼-½" when walking across the field. In other words no more than the thickness of the sole of your boot). Alfalfa is a small seeded crop and seeding depth is very important and depends on soil type. On medium and heavy textured soils you should seed at ¼ to ½" deep and ½ to 1" on lighter sandy soils (1" applies only to dry soil conditions). The seeding rate should be between 15 to 20 lbs/acre for the usual alfalfa mixes. For situations where a larger grass component is desirable, try 18 lb/acre of a typical alfalfa/timothy mix plus 9 lb/ac of a grass mix such as PICKSEED's BP-FA, a combination of both smooth and meadow brome grass, tall fescue and some Italian ryegrass for fast establishment.

The Warner's - Quietly Proud – Three Time Master Breeder

continued from front

The family's achievements are not limited to their cattle; in 1984 the Warner's were honoured as Peterborough County's Farm Family of the Year. Both Wayne and Dean are Past Presidents of the Peterborough Agricultural Society; Wayne is a past director of the local milk committee, past regional director of Dairy Herd Improvement and has been a Holstein Judge. Wayne is currently the Peterborough County director for the Ontario Federation of Agriculture and was a committee member of the Regional Agricultural Impact Study. Dean is an official Holstein judge and has judged the Scotia Classic 4-H show at the Royal Winter Fair and other shows across Canada and Europe. Dean

is a past President of the Ontario Holstein Association and past chairman of the Peterborough Memorial Centre Board. Most recently Dean was awarded the Syngenta 4-H Ontario Arbor Award in recognition of his 4-H leadership of over 30 years.

Dean and his wife Carol are charter members of the Cyclic Vomiting Association of Canada and they have been coordinators with the U.S Association, something they take great pride in.

All this agricultural and community dedication comes naturally. Their father Ron was active in the Norwood Fair, the Milk Committee and the Holstein Club.

What do Wayne and Dean want to accomplish in the next 10-15 years? I really never got an answer; they are very content with their life. They certainly can look back on their successful accomplishments and I am sure they will continue to be active farm and community members. They take great pride in family, their community and their farm.

I want to congratulate and thank the Warner's for allowing PICKSEED to showcase their family accomplishments. At PICKSEED we take great pride in our customers' accomplishments. We wish everyone a safe spring and a profitable growing season.

Tribute to Norman Borlaug, PhD Agr.

Jay Hackney, PICKSEED Vice President Research & Product Development

Norman Borlaug is not only the most successful plant breeder to ever create new varieties, as the father of the Green Revolution, he is probably responsible for saving more lives and feeding more people than anyone ever has. His 94th birthday was March 25th.

Anyone who has taken courses in Ag school would know him as the father of the Green Revolution and know that his signature success story is about breeding dwarf wheat in Mexico. Borlaug was hired by the Rockefeller Foundation to work in Mexico in the 1950s to provide solutions to their agricultural crisis and inability to feed themselves. Mexico looked like the Malthusian situation of inability to feed a population that was growing quickly. Wheat production was poor and farmers and peasants were starving. Borlaug, who was trained as a pathologist, first went to work breeding for rust resistance and this produced varieties that could produce a crop of grain. But the plants now faced another challenge – the heavy grain yield was making them lodge. Borlaug screened a wide range of germplasm, found dwarfing genes in some Japanese dwarf wheat lines and through an innovative breeding and selection program developed disease resistant and lodging resistant wheat varieties that were well adapted to Mexico. This discovery of high yielding, disease resistant, adapted wheat moved that country from a food deficient nation to a net exporter of wheat by 1956; at the same time relieving the hunger and starvation of many. The dwarf varieties

were able to tolerate irrigation and the application of chemical fertilizers and support the higher yields that improved agronomic practices produced. It wasn't just the dwarf wheat that solved Mexico's food problem; it was the supporting network of agronomic practices and government agricultural policies that combined to create the revolution.

With this understanding of the importance of the links between breeding, agronomy and government policy, Borlaug was able to introduce the Green Revolution first to India, then Pakistan. During the time that Borlaug, the Rockefeller Foundation and the Food and Agriculture Organization (FAO) of the United Nations worked in the Indian subcontinent wheat yields increased four times; India went from being a country where poor agricultural productivity and periodic crop failures meant hunger and famine were regular occurrences for millions, to being a net exporter of wheat. The same Green Revolution approach was applied to China, Indonesia and the Philippines and other countries soon followed.

Norman Borlaug received the Nobel Peace Prize in 1970. The honour was bestowed on him with the statement that he is "...an indomitable man who fought rust and red tape . . . who more than any other single man of our age, has provided bread for the hungry world". Borlaug's comment in his acceptance speech was that "you can't build a peaceful world on empty stomachs and human misery".

Join the PICKSEED Team

Have you considered a career in selling seed? Why not join the PICKSEED team. PICKSEED has some key areas where we are looking for sales agents in Eastern Canada.

Our current sales agents have a broad range of background and experience and their talent, knowledge and emphasis on customer service combined with the quality and performance of our forage, hybrid corn and turfgrass varieties together makes an excellent recipe for success.

If you are interested, call PICKSEED's provincial Sales Manager for more details. Paul Wight 519-717-2226 (Ontario & Atlantic provinces) or Victor Lefebvre 450-230-0815 (Québec).

About The Forage Informer

The Forage Informer is an information publication produced and distributed by PICKSEED. It is available in English and French versions. Call us and we will send you a copy of the Forage Informer in the language of your choice.

If you wish to subscribe contact Bonnie Benoit at 1-800-661-GROW (4769) or send your name and address to Bonnie Benoit, PICKSEED Canada Inc., 1 Greenfield Road, Lindsay, On K9V 4S3, Email: bbenoit@pickseed.com

L'Informateur Fourrager est disponible en version français et en anglais. Vous pouvez nous demander la version voulue en vous adressant à l'adresse ci-haut.



PICKSEED
1 Greenfield Rd., Box 304,
Lindsay, ON K9V 4S3
Toll-Free: 1-800-661-4769
www.pickseed.com

