

CDCA

NEWSLETTER



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Ravenwood Acres Harlow, Photo: Brent Work



NEW SEASON, NEW NEWSLETTER

THE TATTOO
LETTER FOR
2021 IS

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Welcome to a new edition of the Canadian Dexter Cattle Association's Newsletter. It's been a while since we've produced a newsletter and its obvious why – it's a big job! We hope that the contents will be informative and useful to you. We would love to include member contributions in every issue, so don't be shy! Write about your favourite Dexter topic, share photos, or send a letter to the editor. We welcome it all!

FROM THE EXECUTIVE



PRESIDENT'S REPORT

Hello CDCA members and fellow Dexter owners! I hope that the holiday season was a good one, if quiet, and wish you all the best for the coming year. Even in these odd times, with Covid keeping folks separated, we are able to manage to keep our cattle fed and watered, and are keeping in touch with family mostly 'virtually'.

I have been a Dexter Cattle Association member for many years and have served on the Board before. I am honoured to take on the role of President and hope to be able to bring some new ideas and activities to the Association. I am a proponent of semen collection; this is a vital service to provide more options to newer members that need to breed their cows, plus if we wish to keep the Dexter breed alive and viable we need to start collecting data and some science going into the future. When planning for the future, it is important to know the past, and to this end we hope to present articles – via our web site and the Newsletter - that we hope will have folks thinking about what they wish the Board to work towards, and to just share knowledge.

I would like to thank our past President, Ian Payne, for his work and I look forward to working with the Board this year. I would also like to comment that we enjoy working with Ron Black in Ontario who has a long history with the Canadian Livestock Records and as our Secretary. I also commend our Webmaster, Simone Buck, for keeping our website up to date. She has suggested that we look at refreshing the site to keep it interesting, so if there are any ideas, please forward. One of the interesting ideas suggested is that we start to collect data that the Association and members can use both to better the breed and assist with planned breeding, and for marketing. DNA tests now available can be customized to give us all sorts of 'markers'; the Association could design a template that would give one standardized test and the opportunity to collect important data; not just colour, polled, PHA and Chondro, but other markers such as carcass quality, maternity traits, etc. I would be interested in speaking with anyone with knowledge of this sort of work.



WHAT ARE THE BENEFITS OF MEMBERSHIP?

The primary advantage to CDCA Membership is that producers pay lowered costs for registration services for their Dexters. Members are also benefitted by a ready-made network of other Dexter producers and owners, including the knowledge and experience that imparts!



PRESIDENT'S REPORT CONT'D

I am also the 'chair' for the Promotional Items for our breed, and we have some interesting things available, please check the website. However, this past month as I sent purchased items off to folks I was stunned at how much the cost of postage has increased, so there will have to be some changes in the pricing!

I have subscribed to a little newsletter from England, we have permission to re-print their articles as long as we acknowledge the source. We'd like to write about your farm or ranch; if you would be so kind please send in a couple of photos and tell us how you got started with the breed. We may email or phone you to interview you. Let us know the best way to connect with you.

Please know that the Board would like to hear from you, by phone or by email, and Shelley is looking for articles, personal experiences with the little cows, photos, cartoons, jokes; anything she can include in the Newsletter to share across the country.

This Association is very small, with a HUGE area to cover...from Vancouver Island to Newfoundland! Our Board meetings are very interesting although it's tricky to find a good time as the time differences cause troubles-it's either supertime or bedtime from one end to the other! We meet quarterly and I extend the invitation to any of you, that when the time comes to seek Directors, please let your name stand, we greatly appreciate everyone's voice.

Catherine Heinzelman

IF A COW DOESN'T PRODUCE MILK, IS IT A MILK DUD OR AN UDDER FAILURE?

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PASTURE MANAGEMENT

GETTING READY FOR SPRING GRAZING

By Richard Waechter, CDCA Director

Winter is always a long, drawn-out, sometimes miserable affair here in Canada. Most of you are probably relying on preserved feeds such as hay, silage, balage, grain or pellets/cubes to keep your livestock going through winter. A few of you might be lucky and have your cattle grazing on stockpiled fall rye or winter wheat, if the snow isn't too heavy. It gets costly, time consuming and there is usually labour involved. However before you know it, birds are chirping, bees are buzzing and the grass is growing. Time to let your Dexters feed on the food they are meant for!

However, you might want to wait and plan carefully. If your pasture resources are very limited, you may want to delay spring turnout. Grasses, legumes and other perennial pasture plants need to build themselves up first to have the proper sugar, starch, cellulose, and proteins (balanced ration) for the rumen of your cattle to function properly. This is all done through photosynthesis (collecting of sunlight in the plant leaves) and uptake of carbon from the air (through the stomata pores in the leaves).

First the new grass shoots need to put up a small solar panel to start this (new green leaf) and then the plant builds its roots and leaves to be ready for business. Remember from the plant's perspective, it wants to reproduce (put up seeds) and that is why it is growing in the manner it does. Throughout all this, roots are growing deeper and deeper (generally) and in some cases, linking up with mycorrhizal fungi (an excellent thing as it allows nutrient exchange).

So when do we turn out the cattle? Generally at the boot stage (3-4 leaves have emerged) for the majority of your pasture. Some grasses like orchard grass, Kentucky bluegrass and perennial ryegrass (not to be confused with cereal rye) are among the earliest species of grass you will likely see. Red clovers and white clovers will usually come next and then we get to other grasses and legumes like timothy, alfalfa, birdsfoot trefoil, meadow brome and reed canary grass. This is not a complete extensive list of all the forage plants, but just a few examples.

If you are forced to turn out cattle on pasture sooner rather than later, be sure to watch their body condition and keep supplemental nutrition going until pastures are in full swing. The supplement can be in the form of hay, haylage, silage, grain, or other feeds such as beet molasses. You should be able to reduce supplemental feed gradually, but again, pay attention to herd health and body condition (The Canadian system is based on a scoring system of 1-5, worst to best).

I highly recommend again you plan some sort of pasture management and grazing rotation. Leaving the grass to grow a little longer and then turning out also has a chance of longer fall grazing. There are many resources out there to help you make a grazing and pasture management plan. Consider checking some of these sites:

- [OMAFRA Rotational Grazing](#)
- [Alberta Pasture Management](#)
- [Manitoba Rotational Grazing](#)
- [Intensive Rotational Grazing](#)

Good pasture, Photo: Rick Waechter



A2 MILK LAUNCH AIMED AT LACTOSE-INTOLERANT

by JACKIE PEARASE, Reprinted with permission from Country Life in BC [October 2020]

New Zealand innovation now being produced on BC farms

ABBOTSFORD – BC consumers now have the opportunity to try something a little different from the dairy aisle.

A2 milk, or milk without the beta-casein variant A1, had its official launch in BC last month as Meadowfresh Dairy Corp. began producing and selling the product under licence from New Zealand's a2 Milk Company Ltd. (a2MC).

"We did a soft launch in select stores in Western Canada this summer and are preparing for the national launch in the next few weeks," says member services manager Ursula Klein of Agrifoods International Cooperative Ltd., which owns Meadowfresh. "By the beginning of October, a2 Milk-branded products will be available throughout BC and across Canada."

The licence gives Agrifoods, through Meadowfresh, an exclusive right to use the trademarks and other intellectual property of a2MC, including the a2 Milk brand, to produce and sell milk in Canada that lacks the A1 protein.

The BC Milk Marketing Board solicited expressions of interest from producers wanting to supply Meadowfresh with milk lacking the A1 protein this past March.

"We had lots of producers express interest. There's definitely more producers than we have sales for the product at this point," says BCMMB supply and business development director Woody Siemens.

With consumers in Canada largely unfamiliar with products defined by the dominance of the A 2 protein – both those trademarked a2 Milk and products previously available from a

few Canadian producer-processors – the BCMMB is building the supply pipeline slowly.

"There's two producers right now that are part of it," Siemens says.

Conventional milk contains a mix of A1 and A2 beta-casein proteins whereas A2 producers claim their products are made with milk that has only the A2 protein.

"Published research suggests a2 Milk ... may help avoid digestive discomfort in some people," says Klein.

"The theory behind it is that a lot of people that say they're lactose intolerant aren't actually; they just have a sensitivity to the A1 protein," adds Siemens.

Agrifoods is marketing its 1%, 2% and 3.25% butterfat milk varieties as the first and only milk certified under the a2 Milk brand in Canada. Cows producing milk for the a2 Milk brand must be identified by genetic testing to naturally produce only A2 protein, segregated from other cows, and milked separately from the rest of the herd to help ensure there is no cross-contamination.

"The key is that only the a2 Milk brand has third-party verification and testing along key points in the supply chain, including the finished product, to help ensure that the milk that consumers bring home to their families contains only the A2 protein, and no A1," says Klein.

The a2 Milk Company was founded in New Zealand in 2000. Its intellectual property includes the genetic test and methods to develop herds that produce milk that only contains the A2 protein.



A2 MILK LAUNCH AIMED AT LACTOSE –INTOLERANT CONTINUED

Nick Dewitt's herd of 100 cows at Dari Delite Farm in Sicamous produces milk for A2 products made at D Dutchman Dairy, which he owns with his uncle Jake Dewitt. D Dutchman Dairy launched its A2 products – whole milk, white cheddar and cheddar curds – in February.

“We had read an article about how well it was doing in Australia and felt that it was a market that was untapped in Western Canada. We were hoping to jump in the front of the wave and bring a new health product to the public,” Dewitt says.

Dewitt had his herd of registered Jerseys tested for the A2 protein by Holstein Canada after his wife developed a sensitivity to milk. When she was able to easily digest the A2 milk products, he knew it would work for others.

“It's been very, very slow progress. It's a move we made for the long term. I'm hoping in the next three years that we can sell all the milk that I produce as A2 milk ,” Dewitt says.

He also aims to expand D Dutchman's line to include butter, ice cream and yogurt.

“The goal is to bring people back to dairy,” he says. Siemens echoes the sentiment, saying more producers will be added to the A2 pool if needed.



Nick Dewitt of D Dutchman Dairy in Sicamous started selling A2 milk – considered easier to digest for people who are lactose intolerant – in February. This month, Agrifoods International is undertaking a national launch of the specialty milk under their Meadowfresh brand. PHOTO / D DUTCHMAN DAIRY

“I actually have quite a list from the first call and we would work off of that for now. It's really based on what the market demand is,” he says. “It's got a good reception so far but it's very new. It's just getting started.”

He is currently using about 5% of the milk produced by his A2 herd to make A2 milk products.

Visit us online at www.dextercattle.ca
Or on our facebook page
[@canadiandextercattleassociation](https://www.facebook.com/canadiandextercattleassociation)



STATISTICS

CDCA – STATISTICALLY SPEAKING 2020

Province	Registrations	Transfers	Standard Member	Associate Members	Junior Members
B.C.	1	1	6	0	0
Alberta	11	25	9	0	0
Saskatchewan	9	16	11	0	0
Manitoba	2	5	5	0	0
Ontario	46	29	20	0	0
Quebec	2	1	3	0	0
New Brunswick	0	0	2	0	0
Nova Scotia	4	3	6	0	0
P.E.I.	27	25	6	0	0
Newfoundland & Labrador	0	1	1	0	0
United States	0	2	0	0	0
TOTALS	102	108	69	0	0

- Dexter Cattle Company, PEI - 26
- Becky Bemus & Phil Smith, ON - 23
- S. Sterling & A. Jones, ON - 12
- Adrian & Rita Hykaway, AB - 9

Top Registrations for 2020



FOOD 4 THOUGHT

You Call Yourself a
Cattle Breeder?

DEXTERS AROUND THE WORLD



Have you checked out Brendan (Farren Farms Dexter Cattle) on his [That Dexter Cow Guy Podcast?](#)

Give him a listen, or visit him on facebook @That-Dexter-Cow-Guy-Podcast.



Based in Northern Ireland this group is keen to promote the Dexter breed and encourage other Dexter breeders.

Check them out at 6countiesnidexters.org/ or on facebook @sixcountiesnidextergroup



Dexters are popular everywhere! Take a few minutes to visit the South Africa Dexters site and see how well these little cows fit in there too!

www.dextersa.co.za/

PROCEDURES: GENETIC TESTING, REGISTRATION & TRANSFER

- 1) Contact CLRC with a request for the type(s) of test(s) you wish to have done. It is preferred that this be done online at www.clrc.ca/order; however, you may also contact the Dexter registrars at CLRC by phone with your request, or print, complete and mail the [request form](#).
- 2) Payment must be made up front when requesting the test(s). Payment must be made by Visa or Mastercard or by cheque, but if you mail a cheque, the kit will not be issued until it is received by CLRC. If sending a cheque, please refer to the testing fee schedule below and add the appropriate HST or GST.
- 3) CLRC will issue you a kit that consists of a testing application form with the information regarding the animal to be tested printed on it. The application form will be sent by email unless the applicant wants to wait for CLRC to mail the form.

When you receive the testing application form (print it if received by email), check the information on it, then sign and date it, and tape the hair sample to the centre of it then fold it from both ends so that the sample is contained within it.

Alternatively, hair sample cards may be purchased from Neogen Canada, the testing lab, at a cost of \$1.00 each with a minimum order of 10 cards. To order, visit <http://www.order.igenity.com>.

Please do not use the former hair sample envelopes or wrap the sample loosely in paper, as this will result in a \$4.00 surcharge by the lab.

If you make your request by mail, you may send the hair sample attached to the hair sample card and request that CLRC then send the testing application form and the hair sample directly to Neogen Canada on your behalf.

Please note that the lab will only process samples for which they have an application form issued by CLRC, and CLRC will only issue a form when the test(s) have been paid for. For parentage verification, PHA and colour tests, please do not contact the lab directly as this complicates the process. For other tests like A1/A2 milk and horned/polled, you may contact Neogen directly if these are the only tests being requested at that time.

- 4) During the transition from Microsatellite DNA to SNP testing you will need to have all sires SNP tested in order to SNP test their male offspring to verify the sire. In these cases, it is best to request the Microsatellite and SNP combination test for the sire and the SNP test for the offspring. This is the best way if you have multiple male offspring from a particular sire. Alternatively, you can request a combination test for the offspring, so that the offspring can be compared to the sire's Microsatellite DNA on file at Neogen Canada, but this would have to be done on each offspring of that sire. The choice up to you.
- 5) Mail the completed form and hair sample to Neogen Canada, 7323 Roper Rd. NW, Edmonton AB T6E 0W4.

Please see page 9 for instructions on Collecting Hair samples.

GUIDELINE FOR COLLECTING & SENDING HAIR ROOT SAMPLES

Collect hair from the tip of the tail (switch).
The root ends or follicles contain the DNA.
Samples must be PULLED, not clipped.

1. Clean the tail switch to remove any foreign material. Comb or brush the tail to remove dead hair. If needed, wash and rinse the tail well, allowing it to dry completely. The sample must be free of urine or manure. Dirty samples cannot be processed, as contamination will make the sample unfit for DNA testing.
2. Wrap approximately 5 hairs around a finger, about 2 inches away from the skin. Give a sharp pull to remove the hair. Inspect the hairs to ensure the follicles are attached. Hair strands without follicles do not contain DNA and cannot be tested.

3. Repeat Step 2 until you have obtained 20 hair roots.
4. Place all of the hair roots at one end and then tape the sample to the test application form or hair sample card as shown below.
5. If doing more than one animal, wash hands before starting the next animal or use a clean pair of surgical gloves to reduce the risk of cross contamination of the samples.

DNA FEE SCHEDULE

Basic Parentage SNP DNA	\$30
PHA	\$35
Red Colour	\$30
Microsatellite & SNP Combination	\$60

*All fees are subject to provincial and federal taxes

CANADIAN DEXTER CATTLE ASSOCIATION SWAG!



The CDCA has a small assortment of merchandise for sale. Please check back as more items are added. Proceeds from the sale of these items go directly to the CDCA. Please place orders with Cathy @ 250-747-3864 or nstar@goldcity.net. Orders will not be processed until payment is received. Postage will be added to total cost. **All prices listed in Canadian funds.**

NEED MORE IDEAS TO PROMOTE DEXTERS?

The best way to promote the Dexter is to brag them up, show them, and eat them! Try holding a BBQ for your community and share a meal of Dexter Beef. Or when you sell an animal, how about giving the purchaser a membership to the CDCA; if it's a first-time owner the cost is only \$25, but even at \$50 its good way to get people involved and grow our membership!



IGENITY® HAIR SAMPLE INSTRUCTIONS

PLEASE READ KIT INSTRUCTIONS COMPLETELY BEFORE PERFORMING TEST.

Call 855.324.9774 to order, or visit NEOGEN.com



1 Pull (do not cut) hair from the tail switch, not tail head. Pull hair in the opposite direction from which the hair is laying. This results in less breakage than pulling straight out from the tail.



2 Make sure hair is free of fecal material and dirt. Save the hair roots (follicles), which contain the DNA.



3 Roots must be clearly visible. Approximately 30 hair roots are needed. For animals with finer hair, a minimum of 50 to 60 hairs is desired. For animals younger than three months, TSUs are recommended since hair roots will likely not be visible.



4 Open the collector and peel back the plastic cover. Insert the root end of hairs in the middle of the collector. Seal the plastic cover over the hair roots and then close the collector cover tab.



5 Trim excess hair extending from the collector. Write animal ID and other information in the spaces provided (do not cut off follicles, which contain the DNA).



6 Properly record animal IDs on the collector cards and correctly enter that information on your order form to match the DNA to the animal.



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UNDERSTANDING POLLED, HORNED, AND SCURS

BY Don Richardson, BSc, DVM (From the Hereford Handbook, reprinted with permission)

Genes are sequences of proteins which occur on the chromosomes in every cell of every living creature. These genes control the development of the embryo. Some traits like horns in European cattle are controlled by only one pair of genes while other traits like tenderness are likely controlled by over 100 different genes.

All animals have two sets of chromosomes in every cell in their body. The dam's eggs and sire's sperm each only have one set of chromosomes. When the sperm and the egg come together to form the fertilized egg it has two sets of each chromosome, one set with genes from the dam and one set with genes from the sire. As the egg develops into a fetus these chromosomes with their genes will dictate which traits develop in the newborn.

There is a single pair of genes controlling the polled/horned condition in European cattle. This gene comes in only two forms, the POLLED gene (P) or the HORNED gene (p). Every calf gets one of these genes from their sire and one from their dam.

REMEMBER...

Polled cattle can be Homozygous Polled or Heterozygous Polled, but Horned cattle are only ever Homozygous Horned!

There are only three combinations possible of these two genes;

- PP means each parent contributed a polled gene. This animal is called **homozygous polled** (PP) and it is POLLED
- pp means each parent contributed a horned gene. This animal is called **homozygous horned** (pp) and it is HORNED
- Pp means one parent contributed a polled gene, and one parent a horned gene. This animal is called **heterozygous polled** (Pp) and it is POLLED

Whenever an animal inherits both a horned and a polled gene they are called Heterozygous and they will always be polled because the polled gene is dominant over the horned gene, and the horned gene is referred to as a recessive gene.

The sperm or egg from a homozygous polled (PP) animal will always carry the big P polled gene and conversely the sperm or egg from the homozygous horned (pp) animal will always carry the little p horned gene. The heterozygous (Pp) animal will produce 50% eggs or sperm carrying the big P polled gene and 50% carrying the little p horned gene.

When Homozygous Polled parents are bred (PP x PP) all the offspring will be PP (Homozygous Polled). All the calves are polled. See **TABLE 1**.



UNDERSTANDING POLLED, HORNED, AND SCURS CONTINUED

TABLE 1 Homozygous Polled Bull mated to Homozygous Polled Cow		Homozygous Polled Cow (PP)	
		P egg Polled gene	P egg Polled gene
Homozygous Polled Bull (PP)	P sperm Polled gene	PP embryo Homozygous polled embryo	PP embryo Homozygous polled embryo
	P sperm Polled gene	PP embryo Homozygous polled embryo	PP embryo Homozygous polled embryo

When Homozygous Horned parents are bred (pp x pp) all the offspring will be pp (Homozygous Horned). **All the calves are horned.** See TABLE 2

TABLE 2 Homozygous Horned Bull mated to Homozygous Horned Cow		Homozygous Horned Cow (pp)	
		p egg Horned gene	p egg Horned gene
Homozygous Horned Bull (pp)	p sperm Horned gene	pp embryo Homozygous Horned embryo	pp embryo Homozygous Horned embryo
	p sperm Horned gene	pp embryo Homozygous Horned embryo	pp embryo Homozygous Horned embryo

When Homozygous Polled Bull is bred to a Homozygous Horned Cow (PP x pp) all the offspring will be Pp (Heterozygous Polled). **All the calves are Polled.** See TABLE 3

The same can be said if the sire is Homozygous Horned and the Dam is Homozygous Polled (pp x PP). Again, **all the calves are Polled.** See TABLE 4

TABLE 3 Homozygous Polled Bull mated to Homozygous Horned Cow		Homozygous Horned Cow (pp)	
		p egg Horned gene	p egg Horned gene
Homozygous Polled Bull (PP)	P sperm Polled gene	Pp embryo Heterozygous polled embryo	Pp embryo Heterozygous polled embryo
	P sperm Polled gene	Pp embryo Heterozygous polled embryo	Pp embryo Heterozygous polled embryo

TABLE 4 Homozygous Horned Bull mated to Homozygous Polled Cow		Homozygous Polled Cow (PP)	
		P egg Polled gene	P egg Polled gene
Homozygous Horned Bull (pp)	p sperm horned gene	Pp embryo Heterozygous polled embryo	Pp embryo Heterozygous polled embryo
	p sperm horned gene	Pp embryo Heterozygous polled embryo	Pp embryo Heterozygous polled embryo



UNDERSTANDING POLLED, HORNED, AND SCURS CONTINUED

When a Heterozygous Polled Bull is bred to a Homozygous Polled Cow (Pp x PP) half the calves will be Homozygous Polled (PP) and half the calves will be Heterozygous Polled (Pp). **All the calves are Polled.** The same can be said if the sire is Homozygous Polled and the dam is Heterozygous Polled (PP x Pp). See TABLE 5

TABLE 5 Heterozygous Polled Bull mated to Homozygous Polled Cow		Homozygous Polled Cow (PP)	
		P egg Polled gene	P egg Polled gene
Heterozygous Polled Bull (Pp)	P sperm Polled gene	PP embryo Homozygous polled embryo	PP embryo Homozygous polled embryo
	p sperm Horned gene	pP embryo Heterozygous polled embryo	pP embryo Heterozygous polled embryo

When a Heterozygous Polled Bull is bred to a Homozygous Horned Cow (Pp x pp) half the calves will be Heterozygous Polled (Pp) and half the calves will be Homozygous Horned (pp). **Half the calves are Polled and half the calves are Horned.** The same can be said if the sire is Homozygous Horned and the Dam is Heterozygous Polled (pp x Pp). See TABLE 6.

TABLE 6 Heterozygous Polled Bull mated to Homozygous Horned Cow		Homozygous Horned Cow (pp)	
		p egg Horned gene	p egg Horned gene
Heterozygous Polled Bull (Pp)	P sperm Polled gene	Pp embryo Heterozygous polled embryo	Pp embryo Heterozygous polled embryo
	p sperm Horned gene	pp embryo Homozygous Horned embryo	pp embryo Homozygous Horned embryo

When a Heterozygous Polled Bull is bred to a Heterozygous Polled Cow (Pp x Pp) one quarter of the calves will be Homozygous Polled (PP), half the calves will be Heterozygous Polled (Pp) and one quarter of the calves will be Homozygous Horned (hh). **Three quarters of the calves will be Polled and one quarter will be Horned.** See TABLE 7

TABLE 7 Heterozygous Polled Bull mated to Heterozygous Polled Cow		Heterozygous Polled Cow (Pp)	
		P egg Polled gene	p egg Horned gene
Heterozygous Polled Bull (Pp)	P sperm Polled gene	PP embryo Homozygous polled embryo	Pp embryo Heterozygous polled embryo
	p sperm Horned gene	pP embryo Heterozygous polled embryo	pp embryo Homozygous horned embryo

Benefits of membership - I liked what you said in one of the fb posts; lower costs for producers to register, transfer, etc., and I would like to add a fellowship with other ownersand I hope that's what the newsletter will foster...provincially, nationally and internationally.



What about scurs? Are these just stunted horns?

Scurs are sometimes called skin horns. These are incompletely developed horn-like structures which vary in size from small scab-like protrusions buried in the hair to small horn-like growths which do not attach to the skull. On rare occasions in mature animals scurs can get quite large, and even appear to become fixed to the skull, but they never grow to the full extent expected from a horn.

The scur gene is expressed differently than the polled/horn gene in that it is influenced by both the sex of the animal and its horned or polled genes.

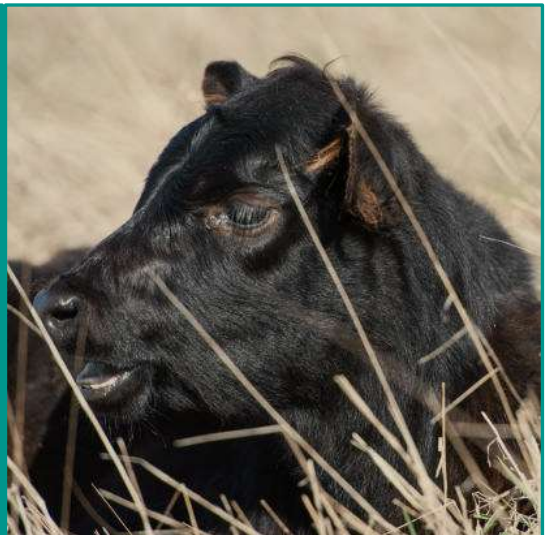
Scurs can only be seen in polled cattle as the horns of horned cattle hide any scurs they might inherit. Polled cattle are therefore often referred to as Smooth Polled or Scurred Polled.

Scurs are NOT an incomplete expression of the horn gene as many breeders believed in the past. Scurs have their own gene. They are controlled by the scur gene big S (absence of the scur gene is noted as little s). Both polled and horned animals can carry the scur gene.

It appears that the P gene for Polled will also influence the expression of the S gene as not all clean Polled cattle are free of the scur gene. Only cattle heterozygous for the polled gene (Pp) will actually grow scurs. In the males the Scur gene is dominant meaning that if the heterozygous polled bull acquires one gene for Scurs from either of his parents he will have Scurs, while in the heterozygous polled female the scur gene is recessive meaning she has to have inherited the S gene from both parents in order to express the scur trait with the growth of these skin horns!

The following chart (TABLE 5) shows the possible outcomes when a smooth polled cow that is heterozygous for both the polled horned gene and the scurred gene is bred to a scurred bull that is also heterozygous for both genes. Each parent has four different combinations possible of these two genes which combine for 16 different combinations in the bull calves and 16 more in the heifer calves! Note how complicated this can quickly get with many different possible outcomes!

CHEWING THE CUD ... WE WANT TO HEAR FROM YOU WITH ANY DEXTER-RELATED QUESTIONS, QUERIES, OR TOPICS OF DISCUSSION! PLEASE EMAIL LETTERS TO THE EDITOR RAVNWOOD@TELUS.NET





UNDERSTANDING POLLED, HORNED, AND SCURS CONTINUED

TABLE 5		Smooth Polled Cow Heterozygous for both the horned and the scurred gene PpSs			
		PS	Ps	pS	ps
Scurred Polled Bull Heterozygous for both the horned and the scurred gene PpSs	PS	Smooth Bull Smooth Female PPSS	Smooth Bull Smooth Female PPSs	Scurred Bull Scurred Female PpSS	Scurred Bull Smooth Female PpSs
	Ps	Smooth Bull Smooth Female PPSs	Smooth Bull Smooth Female PPss	Scurred Bull Smooth Female PpSs	Smooth Bull Smooth Female Ppss
	pS	Scurred Bull Scurred Female PpSS	Scurred Bull Smooth Female PpSs	Horned Bull Horned Female ppSS	Horned Bull Horned Female ppSs
	ps	Scurred Bull Smooth Female PpSs	Smooth Bull Smooth Female Ppss	Horned Bull Horned Female ppSs	Horned Bull Horned Female ppss

The result of this cross shows that 25% of the calves will be horned, 25% will be Homo polled, and 50% Hetero Polled. 50% of the polled bull calves will be scurred and 50% will be clean polled but 83.33% of the polled heifer calves will be clean polled and only 16.66% of the Polled heifers will have scurs. Of course we can't see scurs on the 25% of the calves which are horned!

When you evaluate a scurred animal in your herd remember that **only cattle that are heterozygous for the polled trait (Pp) will have scurs and that the gene for scurs is sex linked and is dominant in bulls and recessive in females.** Once you have selected for a 100% homozygous herd you will no longer see any scurs but the gene for scurs may still be there to be passed on to the next generation.

This discussion above holds true for all the European cattle seen in Canada. The tropical breeds with Zebu ancestry, like Brahman, Santa Gertrudis and Braford also carry a third gene called the African horned Gene (Af). Scientists are reasonably sure that this Af gene, which is dominant over Polled, is also affected by the sex of the animal with PP and Pp bulls needing only one copy of the Af to be horned but PP and Pp cows need two copies of the Af gene to be horned.

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