

A Great Photo Is Worth A Thousand Words

by Carol Ann Traynor

Many Dexter producers publicize their stock by first placing an ad, then come inquiries:

Dear Sirs:

I saw your ad and I'm interested in your Dexters. I live (three states away). Please send pedigrees, prices, and photos. If they look nice, I will stop by during my August vacation in your area.

Yours Truly,

Mr. Average Buyer

Many would never fully answer this buyer's inquiry; they do not have any photos! Afraid of amateurish photos that may quickly kill a possible sale, they send prices, a glorified description (pointing out practically no faults), and encourage the inquirer to drive across three states to see the cattle and form an opinion. It stands to reason that clear photos along with written data have a far better chance of producing a sale.

Pasture photography of cattle roaming can be frustrating, but with patience, great shots can be obtained. More than any other pose, the classic side view with the front leg closest to the camera slightly forward of the far front leg and the hind leg slightly behind the far hind leg will give a pleasing silhouette while emphasizing the animal's skeletal frame and general balance.

An assistant with a feed bucket or cubes (if the animal is gentle enough) held high in the air will generally raise the head angle for a good alert appearance. (To emphasize horns, be sure to get the animal looking directly at you in order to show the entire horn spread.)

The best summer light hours are from about 30 minutes after sunrise to two hours before high noon and two hours after high noon until nearly sunset. Harsh bright high noon light produces drab shadows. A good general rule for getting the proper angle is to have your shadow point toward the animal.

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Photo from high angle. **Results:** Animal appears shorter, but looks like she is standing on a hill — rear higher than front. Background is cluttered and confusing. Left side of head vanishes into body.



Photo from middle of body. **Results:** This photo, while not excellent, is the best of the three examples. General animal balance is much better and leg placement is acceptable. Head profile indicates a good alert appearance.

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From The President

As our annual meeting date draws nearer, we need to consider items for the agenda for the meeting.

It is an obligation of each individual Director and Officer to attend the annual meeting, so as to have representation from each region. Of course, there are sometimes situations that come up that we must deal with at that time. If for any reason you are not able to attend the annual meeting, I would appreciate hearing from you as soon as possible.

Items that you have for the agenda should be sent to the Secretary. You may call Rosemary or mail them to her, but please do so as soon as possible. I have had a number of calls stating that they are unable to get through to Rosemary by phone. After checking, I have found out that the telephone company is not advising that the area code had been changed and that the number they were dialing was not a working number. The correct phone number for Rosemary is 660-463-7704.

Plans for the annual meeting are proceeding very well thanks to Marvin Johnson and his assistance from Joanie Storck. Sounds like a very interesting and exciting meeting.

At the Director's meeting, you are going to need to come up with officers for the coming year. Try to give some serious thought as to who might best represent the organization and continue accomplishments for the Association.

There are a number of Directors this year that have not previously attended the meetings, but we need input from all the Directors. Sometimes new ideas help to resolve problems that have arisen.

The next World Dexter Congress is scheduled for the year 2002. We certainly will need to discuss the part of the Association in their involvement. This would seem like a long time off, but the time will be on us before we realize it.

Hope to see each of you in Wichita. In the meantime please forward your agenda items to Rosemary or myself.

Have a safe trip getting there.

Jim Johnson
President, ADCA

Region II Meeting

After a fine lunch, Director Anna Poole greeted everyone and explained her decision not to invite a guest speaker with an attendance of less than twenty members. The first topic on the agenda for discussion was the marketing of Dexter beef. Jack Shipley opened the discussion by explaining that his cattle program is set up mainly for the sale of beef. He sells his beef at the same market price as conventional breeds and the price is down now. He mentioned that it would be nice to be able to market Dexter beef like Oregon Country Beef in Brothers, Oregon. Oregon Country Beef peddles its product as "no hormone" and gets a premium price from buyers in Portland, Seattle, California and Japan. Mr. Shipley believes he is probably underselling his beef and would like to get into the specialty market. He has orders for beef before the calves are even born. He also believes that there is a concern now from customers for ecologically managed herds. Hoe Mielke also doesn't have any problems selling his beef. He posts a notice at work for advertisement. He says his customers like the small size cuts. Joe described the brochure that he puts out that explains about Dexter beef and the meat packing process. He sells ¼ beef for \$2.10 per pound and ½ beef for \$2.00 per pound. He likes his customers to know exactly what the process entails as he is selling his reputation. Joe agreed to share his brochure with other members. A discussion followed concerning USDA inspection and hanging time for beef (consensus that 10 days minimum was best). All members present agreed that we could probably raise our animals in a consistent organic manner (no use of routine antibiotics or feed from animal derivatives). Jack Shipley felt that the amount of exposure to other herds should determine what vaccines are necessary for your herd. Joe said that there is a difference between raising organic beef and being certified organic and felt that we could come up with some sort of guideline for our organization. Members felt that two years of age was a good age to butcher either as bulls or steers. Jack would prefer to sell to restaurants but it was questionable as to whether our organization could supply enough beef. It was decided that Anna would send out a questionnaire to discover who might be interested in a co-op type beef operation.

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*1999
Annual ADCA
meeting in
Wichita, Kansas,
July 16, 17, &
18th.*

A Great Photo Is Worth A Thousand Words

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Good results can be obtained using a simple fixed-lens camera, if you remember to fill your viewer frame with the animal. For cattle portraits, I use a 35 mm camera and 200 speed film with an 80 to 210 mm zoom lens at 18 to 30 feet from the animal. Most professionals will center the camera lens on the middle of the animal's body. Photographs from a high angle, tilting the lens downward, tend to emphasize compactness, making the animal appear shorter on his feet. Conversely, holding the camera at ground level changes appearance in height. I prefer kneeling, aiming the lens just behind the elbow at the rib cage.



Helpful Hints

*Buy quality film/check speed of film - sunny vs. cloudy day.

*Ears forward/face toward you for horns.

*Be aware of background distractions (beware electric poles/posts that appear to be growing out of the animal's back).

*Be aware of background contrast - light vs. dark.

*Have an assistant.

*Be patient - it takes time!

*Relax and have fun!

Are good photos important? The future of your operation may depend on it!



Photo from ground level. **Results:** Animal appears taller, but front-on angle distortion makes head large and rear taper narrow. High-noon light creates harsh shadows, right side of head vanishes into body.

NATURE'S CONTROL

by Jack Shipley

I often have concerns about the side effects of the different drugs or chemicals that are available for us to manage our Dexter cattle and Coopworth sheep. Almost everything that comes from the veterinarian or the farm store always state that we shouldn't get the application on our skin and if we do, we need to wash it off immediately. If this stuff is so bad for humans, then why do we want to put it on the critters that are our pets or those that we plan to butcher to eat or sell? Subsequently, I am always keeping my eyes and ears open for alternatives to conventional industrial livestock management practices.

In June of 1997 I saw an article in the Capital press (a northwest regional weekly agriculture paper) about a fellow in Wendell, Idaho, who had been using a parasitic wasp to control flies in his dairy herd for over five years. I immediately called our local Extension Service office. They didn't know what I was talking about but suggested that I call the Oregon State University Extension Service in Corvallis, Oregon. After a couple of phone calls I was given a telephone number of a company called Nature's Control that was located in Jacksonville, Oregon, less than 25 miles from our Applegate Valley farm in southwest Oregon. We have used fly parasites every spring with followup applications each month during fly season and have significantly controlled the house, stable, blow, face and horn fly populations on our property ever since. From my prospective, this is the next best thing since sliced bread!

Unlike the more familiar social wasps, such as paper wasps, the tiny gnat sized, parasitic wasps are solitary except when mating and they do not pester humans. They kill manure flies by injecting the fly pupae with their own wasp larva. That larva consumes the fly pupa and then emerges as a new adult wasp. Spraying or dusting with insecticides just kills adult flies; new flies keep hatching and the problem is never solved. Spraying also kills the predator as well as the prey. The fly population can be controlled naturally with the predator wasp combined with other manure management activities such as composting which creates heat and kills flies during their development.

If you are interested in this concept, contact Nature's Control, for a catalogue of mail order natural pest controls at P.O. Box 35, Medford, Oregon 97501, or call 541-899-8318 or fax 541-899-9121.

Herd Health

By Eric Lawlor

This article was first published in the Fall 1989 issue of The Bulletin.

This is a brief summary of a Herd Health program that Dr. J. Vanderbyl, D.V.M. presented to the annual meeting of the American Dexter Cattle Association in Guelph, Ontario. It is intended only as a guide, as I am far from an expert in animal care. Please consult with your vet regarding all the topics covered here and the numerous topics not mentioned. I have not covered everything that comes to mind but I feel I have touched on the most important aspects of herd health. Other sources of information are your feed reps, state and federal experts and pamphlets, county ag. reps and experienced farmers. Again, your most important reference and friend regarding herd health is your vet.

Visual Exam:

Things to look for in a sick cow.

Off Her Feed; not chewing her cud; thin, especially if not milking heavily; elevated temperature - normal is 39°C or 102°F, calves have a slightly higher temperature because of a higher metabolic rate; head down; off by herself; dull look in her eyes; eyes sunken in indicate dehydration; dull coat.

A well cow is alert, is eating or chewing her cud, has a full and active rumen, and a shiny coat.

Feed Analysis:

To keep a cow in good condition her ration must be balanced. Have free choice salt and free choice mineral available. Loose salt and loose mineral are better than mineral blocks as a cow probably cannot lick enough off a block to satisfy her needs. Have your feed analyzed to determine at least crude protein (CP), total digestible nutrients (TDN), crude fibre (CF), calcium (Ca), and phosphorus (P). Your feed rep. or trusted feed dealer will help you balance your rations for your different production requirements. Ca and P in the total diet should be in a ratio

ranging from 3:2 to 2:1 Ca:P, therefore, choose mineral based on your feed analysis to arrive at this ratio.

Remember, fertility is the first thing to suffer in cows in poor condition!

Bull Exam:

Must have good hind legs to support itself: when walking the legs should move straight forward: look for a level back with a level tailhead (a high tailhead may be passed on to females and result in a horizontal vulva which lends itself to uterine infections from feces entering the vulva); testicles should be of good size and hang down freely; one can hang slightly lower than the other but do not use a bull showing signs of cryptorchidism (one testicle not descended or not fully descended).

Rectal Exam:

Your vet can determine pregnancy and stage of pregnancy from 30 to 40 days post conception. The vet can also determine stage of estrous cycle if not pregnant, status of uterus after freshening, ovarian cysts, and other aberrations in estrous cycles and suggest possible solutions or treatments. A normal uterus in a non-pregnant cow should be the size of a fist. It should return to this size within one month of freshening or slightly longer in older cows. If it takes longer the vet can prescribe shots to reduce it and to stimulate cycling. A cow should return to cycling within 60 days of freshening. Bloody mucous up to 15 days after calving is quite normal but if it persists beyond 20 days it may indicate uterine infection - have her examined. While doing rectal exams the vet should look for signs of *Mycoplasma* infection. It appears as small pimples or postules in the vulva and generally leads to uterine infection. It is a bacterial infection that can and will likely be passed on to every cow in the herd via the bull or even her tail. This disease is spreading out from Ontario so all cows being sold from Ontario and surrounding states should

be examined for it. All uterine infections and ovarian aberrations generally result in infertility but can usually be treated successfully.

Dehorning:

For ethical reasons all veterinary students are now being taught not to dehorn animals without first anesthetizing the nerve. It should be injected midway between the eye and the ear in the groove that runs between them. If blood appears in the syringe withdraw it and reinsert. (This applies to any injection other than intravenous). Wait a few minutes for the freezing to take effect before dehorning. During winter a gouger or cutter can be used and then cauterize the wound or pull out the artery to stop the bleeding. During the fly season burn the horn bud off so as not to expose the sinus to fly and maggot infection. When burning ensure a copper ring evenly around the horn bud. Have your vet demonstrate anesthetizing before you try it yourself. Dehorn calves as young as possible to minimize stress. Ideally all should be done by one month of age but try to at least do it by 3 months. However, horns of any size can be done on animals of any age.

Castrating:

When using a burdizzo to pinch or squeeze the cords do as young as possible. It can be done when the calf is only a few days old. Squeeze one side at a time, do not squeeze across the middle as this will cut off the blood supply causing the scrotum to wither and drop off opening it for infection. Squeeze one side at a time above the testicle. You should be able to feel the cords. It is recommended to squeeze twice on each side and leave the burdizzo clamped for half a minute each time. If the calf is more than 6 to 8 months it is easier to cut the testicles out. This should not be done during fly season and your vet should show you how. Again for ethical reasons the use of elastrator bands is frowned upon. *Continued on page 6...*

Herd Health

Continued from page 5.

Magnets:

Magnets should be inserted into the reticulum of calves once they are eating mostly dry feeds. Use a bolus gun to insert. Magnets will attract metallic materials that may be eaten. Nails, wire, etc., if eaten, can cause hardware disease in which the metallic article penetrates the rumen wall into the thoracic cavity and will eventually puncture the heart or lungs causing death.

Hoof Trimming:

Hoof trimming should be done if the toes are growing excessively long or are mis-shapen, or the cow is low in the heel. Your vet can trim hooves or may recommend someone who will do it. Animals with proper legs and feet should not require hoof trimming as they will wear down evenly.

Worming:

Many worming medicants are available for a number of conditions. Probably the best all round grubicide is "Ivomec" or Ivermectin, which has efficacy against almost all internal and external parasites. However there are many other very good products on the market and you should consult with your vet to determine the best time and medicant to use for your area. For example, medication to kill warble fly larvae should *not* be administered from early December until late March because the larvae are migrating close to the spinal cord at this time and killing them may result in paralysis and/or death.

Vitamin Injections:

Vitamins A, D and E can be injected in the fall and spring before calving to act as a booster. However, they should also be included in their mineral mix and in the feed supplement.

Udder Care:

Before calving the udders should be clean. Wash them off with warm soapy water. Watching for mastitis is much easier for those who are milking their cows but everyone should carefully observe their cows' udders. Subclinical

mastitis can be detected by elevated chloride (CL) levels or with a CMT (California Mastitis Test). Mild clinical shows increased pH and reduced volume and watery milk. A cow with severe clinical mastitis may show a slight hunching, pain when touched, heat, redness, swelling and increased body temperature. If detected consult your vet for a proper treatment program.

Vaccinations:

Consult your vet for recommendations in your area. Some common diseases to vaccinate against are leptospirosis and rabies. Canada is now declared brucellosis free so testing is no longer necessary and animals should not be vaccinated. However, all animals brought into Canada must be tested prior to entry.

Calf Care:

When calves are born the umbilicus should be sprayed or dipped in iodine, especially if born in confinement. An injection of vitamins A, D and E can act as a booster and special care should be taken for those in areas where the selenium (Se) levels in the soil are low. A gestating cow with a diet deficient in Se may drop a calf susceptible to white muscle disease. Balance her diet with a concentrate containing Se or give her an injection of Se and inject the calf at birth with Se.

Note: Se requires adequate amounts of vitamin E for its proper metabolism so both must be supplemented or injected.

Note: Se is extremely toxic if just slightly in excess of its normal level. Therefore, consult with your vet regarding the proper quantities to inject or your feed rep if it is being supplemented in the ration.

Note: Please remember that this is meant to be a guide and not a definitive paper on herd health. I have stressed at the beginning, throughout the text and now to consult with your veterinarian before undertaking any treatment or procedure of which you are not completely sure. ❖

Region II Meeting

Submitted by Sandra Chaney

Continued from page 3.

The possibility of a bull exchange was the next topic. Could our region put together some type of brochure listing bulls to trade, sell or exchange? Joe Mielke felt that a fair price for a yearling bull should be somewhere in the \$500 - \$1,000 range. John Wolfe quoted bull prices from the Record Stockman at over \$2,000.

Anna reviewed national advertising from Kathy Smith. Members present agreed to come up with a bi-yearly newsletter called *Northwest Dexters*. It will include a newsletter with animals for sale and trade. Pictures and adds can be sent to Joe Mielke and he will do the editing. Anna Poole will copy and send. It was agreed not to include Washington and California for solicitations the first time around. Dexter association monies will be used for the first mailing, a \$5.00 add fee could be used in the future. *Northwest Dexters* will be mailed out at the end of May. In the future it will be mailed in March and again in the fall. Ideas for articles to be submitted are A.I. (Sandra Chaney), transportation of cattle (John Wolfe) and vaccine programs.

Anna Poole distributed a handout that included information on the grading system from the extension service and vaccination programs. Feed and protein needs were briefly discussed. Joyce Jarmin mentioned that she had hoof problems and wondered if it had to do with too much protein. Some members felt that the terrain might be more of a problem in the case of overgrown hooves. Anna explained that the Extension Service can field test your hay and evaluate your feed program. Jack Shipley shared his experience with fly control using parasitic wasps and John Wolfe his fly traps.

John Wolfe reviewed the use of the Oregon Transportation Certificate and the T-slip.

The meeting was adjourned and everyone went outside to enjoy the weather and Anna's herd. ☼

Coat Color In Dexters: A DNA Study

Dexter Red and Dun Clarified by DNA Study

An American company has isolated the DNA locus for coat color in cattle. At this site, they found three colors: dominant black, recessive red and a dominant 'wild' gene whose color varied from breed to breed (black, brown or red but which was consistent within each breed). This company now offers a DNA test for coat color. The DNA locus for patterns, such as brindle, is not yet identified.

Carol Davidson, a Canadian Dexter breeder for the past 18 years with many projects to her credit, heard of this test and undertook a study to determine the source and genetic predictability of non-black Dexters. She has offered the results of her study to Dexter breed associations around the world.

Using blood and semen from Dexters from Canada, the US and England, she tested a significant sample of black and non-black animals. Carol was surprised and excited to learn that in Dexters, the 'wild' gene is a deep, rich red; and dun Dexters are a dilute form of black. [It had been theorized by some that Dexter dun was from Jersey brown. This theory is now disproved.]

Carol pursued the dun color and found Mendelian proof of a pair of simple single recessive dilute genes. The pair of dilute genes changes black to dun. A dun can have two black genes, or one black gene and one red one. In this latter case, the animal is still dun because black is dominant over both reds. Being recessive, if only one of the pair of dilute genes is present, there is no color change. Dilute genes are found in most breeds. The dilute gene DNA location is still not known.

She jokingly says, "I've moved the frontiers of knowledge ahead about the thickness of a piece of kitchen cling film." Joking aside, the study will be of immense benefit to all Dexter breeders. The test correctly identifies red and dun for registration and color breeding

purposes.

Anyone interested in having his Dexter color typed can apply to Genetic Visions Inc., The Faraday Centre, 2800 S. Fish Hatchery Road, Madison, WI, USA, 53711, for a fixed fee of \$50 US for each animal tested. Blood samples and thawed semen can be sent by *express* post or courier from any country. The application must give the sender's name and mailing address, the breed, and the name and registration number of each animal. The \$50 fee *per test* must accompany the application and be sent in *US funds*.

Any questions can be addressed to Carol Davidson via Bright Meadows, R.R. 1, Ladysmith, BC, Canada, VOR 2EO, or e-mail: cddexter@islandnet.com or phone 1-250-245-4046, fax -7474.

Coat Color In Dexters: A DNA Study Objective

This study had two aims: to provide a definitive answer to the question "what color is it?" when distinguishing between dun and red; and to help breeders to predict the statistical outcome when breeding for color.

Procedure

An American company, using research done in Norway and Switzerland, and their own research, has perfected a test for bovine coat color identification. Because this testing procedure looks directly at the DNA of a specific gene, it is very accurate. There is a lot of highly technical information available, but here it is sufficient to note that a total of three different coat color gene types exist.

The first type is a dominant gene and is scientifically described as E^D . It is associated with black coat color. The second type is a recessive gene and is scientifically described as e . It is associated with red coat color. The third type is another dominant gene, and is scientifically described as E^+ . It is referred to as a 'wild' type because

the color expression is consistent within a breed but changes between breeds. It has been identified as black in Simmentals, brown in Brown Swiss and a form of red in Holsteins.

Using semen and blood samples from black and non-black Dexters from Canada, the US and England, tests were performed by the above noted American company using their DNA coat color identification process, with the following results.

Results

1. Animals whose phenotype (appearance) was black tested E^D/E^D (black/black) or E^D/e (black/red) or E^D/E^+ (black/wild).
2. Animals whose phenotype was *not black* tested either as [a] #1. above, OR as [b] e/e (red/red), E^+/E^+ (wild/wild) or e/E^+ (red/wild).

[a] These non-black Dexters testing as black appeared faded brown or dark brown or rich dark brown (what is known as light or dark 'dun').

[b] These non-black Dexters testing as red and/or 'wild' appeared carrot red or auburn (Irish Setter red).

DNA Color Test

KEY: E^D genetic dominant Black
 e genetic recessive red
 E^+ genetic dominant Wild
 (red in Dexters)

Test Result	Genetic Color	Appearance
$E^D E^D$	Black/Black	black or dun
$E^D e$	Black/red	black or dun
$E^D E^+$	Black/Wild(red)	black or dun
ee	red/red	red
eE^+	red/Wild (red)	red
$E^+ E^+$	Wild (red)/Wild (red)	red

Non-black animals are either dun or red and the test codes are distinct between the two.

Coat Color in Dexters: A DNA Study

Conclusions

Dexters can carry dominant black genes, recessive red genes and/or dominant 'wild'-type genes.

	Code	Genetic Color	Appears as
a)	E^D/E^D	dominant black	black or dun
b)	E^D/e	black and red	black or dun
c)	E^D/E^+	black and wild	black or dun
d)	e/e	recessive red	red
e)	e/E^+	red and wild	red
f)	E^+/E^+	dominant 'wild'	red

The black gene is the dominant gene in Dexter coat color. It overrides both of the other color genes.

The recessive red gene is only expressed (is visible) when it is paired with another recessive red gene. Based on the animals tested, the recessive red appears in Dexters to be the orange or 'carrot' red.

In Dexters, the 'wild' gene is expressed as red also. Based on the animals tested, the dominant 'wild' red appears to be the darker, rich 'old-fashioned' red. When paired with black, the black dominates; with recessive red, it dominates.

Dun Dexters tested genetically pure black or black with a red or 'wild' gene. For duns to be genetically black, dilute genes must be present. That black animals can have both black and dun offspring and duns (when bred together) produce more duns are clear indicators that the dilute gene is a simple single recessive. If a pair of dilute genes is present with either of the two black/red combinations [(b) and (c) above] then that animal will also be dun, because black is dominant over both reds, and dilute black is dun.

Dilute genes are another whole topic: it is sufficient for this paper to note that a dilute gene exists and that in Dexters, so far, appears to be recessive. The pair of dilute genes must be homozygous (the same) for the dilution to be expressed (just like recessive red). Because the location for the dilute gene is not yet identified, its presence cannot be tested for.

Color: Theory

Until quite recently, it has been assumed and accepted that red and dun were somehow mutually exclusive, that both were a form of recessive, and that if one bred a red and dun together, one *always* got black. As duns became more popular there were more red/dun matings, and in a few of these, the offspring were dun or red instead of black. This caused breeders to go back to the drawing board, and all sorts of fancy theories arose to account for these new color results. The most popular theory to account for dun has been that it comes from mis-registered Jersey crosses or from Appendix upgrades from Jersey cows. It is now proven that this is not the case; in fact, the Jersey coat color gene (brown) bears no genetic relation to Dexter dun whatsoever.

The first surprise in this study was that dun Dexters are actually dilute black. The second surprise was that Dexters carry a second red coat color gene.

Genetics Primer

Definitions

Homozygous: both genes of the pair are the same; i.e. black and black

Heterozygous: each gene of the pair is different; i.e. black and red

Dominant: the presence of the characteristic in just one of the pair is enough for that characteristic to be expressed (visible); i.e. black

Recessive: the characteristic is expressed (visible) only when both genes of the pair are the same; i.e. red

Genotype: the genetic make-up of the animal; i.e. black x red = dominant black carrying recessive red

Phenotype: the visual appearance of the animal; i.e. black x red = black

It is common to express dominant genes by Upper Case Letters, and recessive genes by lower case letters. For readability, *B*, *r* and *R* will be used:

B = black (Dominant)

r = red (recessive)

R = red (Dominant)

With the scientific DNA identification of the coat color gene, it is now possible to know and predict how—and why—the colors work. *Continued on next page...*

Memorandum

Carol Davidson

Now that dun Dexters have proved *not* to be from Jersey crosses, I am concerned that the new target will be wild (red) Dexters.

Why? Because the wild gene, RED in Dexters, and found in all breeds tested so far, is identified as the coat color gene in Jerseys (and Brown Swiss).

Along with Angus (~55), 'unknown' (~60), and 'unregistered' Dexters (~107), Jerseys (~60) have been one of the four most popular x-sources of Dexter Cattle Society Appendix 'A' registrations ~ specifically from 1969 onward. Thus, it is valid for *some* Dexters to get their wild (red) color gene from Jerseys through this source. *Continued on next page...*

Coat Color in Dexters: A DNA Study

Color: Genetic Options

With three color gene pairs (dilute is not a color gene and can be found with any coat color), there are six possible genetic coat color combinations:

BB	Black/Black	(pure [Dominant] Black)	(E ^D /E ^D)
Br	Black/red	(Black carrying [recessive] red)	(E ^D /e)
BR	Black/Wild	(Black carrying [Dominant] Red)	(E ^D /E ⁺)
rr	red/red	(pure [recessive] red)	(e/e)
rR	red/Wild	(Red: one of each type)	(e/E ⁺)
RR	Wild/Wild	(pure [Dominant] Red)	(E ⁺ /E ⁺)

From these six, there are 21 possible sire x dam permutations. Remember that dun is still black *genetically*. Dun will be dealt with separately.

	1	2	3	4	5	6
a)	BB x BB	BB x Br	BB x BR	BB x rr	BB x RR	BB x Rr
b)		Br x Br	Br x BR	Br x rr	Br x RR	Br x Rr
c)			BR x BR	BR x rr	BR x RR	BR x Rr
d)				rr x rr	rr x RR	rr x Rr
e)					RR x RR	RR x Rr
f)						Rr x Rr

Random examples a2, b3, and c6 are used to illustrate how the combinations work:

	B	r
B	BB	Br
B	BB	Br

	B	R
B	BB	BR
r	rB	rR

	R	r
B	BR	Br
R	RR	Rr

A simpler way of showing the same thing is in linear form:

BB x Br = BB, Br, BB, Br and Br x Br = BB, BR, rB, rR and BR x Rr = BR, Br, RR, Rr

Genetically these three are

Black x Black (red) = Black, Black (red), Black, Black (red)
 Black (red) x Black (Red) = Black, Black (Red), Black (red), Red (red)
 Black (Red) . Red (red) = Black (Red), Black (red), Red, Red (red)

Color: Phenotype Options

Still ignoring dun for the moment, there are only two coat colors phenotypically: black or red. Because black has proved dominant over both reds, any combination containing black and red genes will appear black, and only a DNA test will determine the presence of a red gene (or unless a red calf is born to a black animal). Because wild Red is dominant over recessive red, 'Rr' will be wild red in color.

Phenotypically the three above examples are:

Black x Black = Black, Black, Black, Black
 Black x Black = Black, Black, Black, Red
 Black x Red = Black, Black, Red, Red

Color: Dilute Black or Dun

Dun is the dilute form of black. Dilute genes are found in most breeds. In Dexters, the dilute gene identified is a single simple recessive. This has been proven by review of the breeding statistics of two English AI bulls who were part of this study. One was heterozygous for dilute with 135 calves recorded, the other homozygous for dilute with 90 calves recorded. Further research into North American animals, by projection, confirmed this finding.

To date, all non-black animals *not* carrying two red genes (of either type) have tested as either homozygous black or heterozygous black and wild red. The third non-black combination of black and recessive red was not found in the test group. Had an animal of this combination been present, it would also have been dun.

Color: Dilute Red

At this time, because of the difficulty for this author in accessing international gene pools, and because of the cost of testing (\$50 US each), red 'rr', and 'RR' animals homozygous for dilute have not been identified. It has been suggested that homozygous dilute red animals will be cream. Despite opportunity, to my knowledge, no creams have appeared so far. ❖

◆Memorandum◆

Continued from previous page.

However, it would appear that wild color genes have been with our Dexters since the beginning. Early breeders have always claimed the old Dexter red was a rich, dark color (Dexters of this red have tested dominant wild); that one never saw carrot reds 'in the old days', and that they consider this to be a *modern* variation (Dexters of this red have tested recessive red).

I have lain to rest the ghost of Jerseys in dun Dexters. If others were now to revive this ghost, and re-apply it indiscriminately to all dark red Dexters, it would be an abuse of the results of my research, and an unfounded slur on many breeders and herds.

I ask that you guard against this eventuality. ✕

◆ Classified Advertising ◆

Cost for an annual subscription (six issues) to the Bulletin is \$10 for non-members. Make check payable to the American Dexter Cattle Association and send to: American Dexter Cattle Association, Route 1, Box 378, Concordia, MO 64020.

Based on current studies the Association recommends that the breeding short-legged X (to) short-legged animals be avoided because of a genetic condition existing in some Dexters.

Dexter Cattle For Sale

Raccoon Valley

Dexter Farm

2292 240th St.

Dallas Center, Iowa 50063

1-800-752-2043

For Sale: Bull calf born 3/98, bred cows and heifers.

ARROW WOOD FARM NEW JERSEY

HERD REDUCTION

FOR SALE: 1998 and 1999 black heifer and bull calves, bred cows and bull. Very small and well conformed. Calves bottle fed and well handled.

Allan and Elaine Abrams

Telephone: 201-327-0740

104 E. Saddle River Road

Fax: 201-327-1912

Saddle River, NJ 07458

Registered Dexter Cattle for sale: bred cows, heifers, bulls.

Chuck and Bette Dickinson

11845 Hastings Road

Clarksville, Michigan 48815

Day phone: 616-868-7394; Evenings: 616-868-0154

FOR SALE: Nice black bull calf born in August 1997. Also, other cattle available. Call or write for current information.

Stillwater Dexters

996 Twp. #553 Rd#2

Ashland, Ohio 44805

Phone: (419) 945-2458

L & L YALE DEXTER FARM

10455 Latting Road

Cordova, TN 38018

(901) 756-1040

email: LYale39724@aol.com

Herd Reduction - Good selection of cows, bulls, and heifers. Call for more info.

Calves, cows, and bulls. Embryos also available. All from certified and accredited herd by Ohio Dept. of Agriculture.

Briar Hill Farm

James G. Johnson

4092 Broadview Rd.

Richfield, OH 44286-9605

(330) 659-4861

Dome-In Go Ranch Dexters

Registered Dexter Cattle for sale

Raised in the mountains of New Mexico

Good Cattle - Good Prices

Ivan & Patty Preheim

P.O. Box 806

Capitan, N.M. 88316

(505) 354-2068

For Sale:

Several bred females and a few select bulls.

Call evenings.

Philip R. Martz

1229 Leister Rd.

Fairhope, PA 15538

(814) 267-5052

Dexter Cattle For Sale

Registered Dexter cattle for sale:

Bred heifer, heifer & bull calves - short and tall.

Allen & Linda Holmes
Cloverdale Farm
RR 1 Box 262A
Groveton, N.H. 03582
(603) 636-1329

Maryland

Token Farm

For sale: Bull calves -

dob 9/1/97

red/dun

twins, dob 8/19/98

1 black

1 red/dun

Mary Ann Brewer
10724 Pheasant Drive
Clarksburg, MD 20871 - 8523
(301) 865-6031
toknhart@erols.com

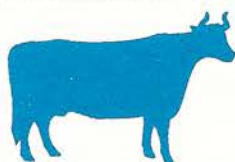
P.O. Box 602
Fort Wood, MO 65473

Jeanie V. Douglas
(573) 765-4626

ISAIAH FARMS
email: isaiah2040@hotmail.com

Registered heifers & bulls - also steers for processing
YOU are welcome to visit
this gentle disposition herd of all-black
horned, quality Dexters

HIGHER QUALITY BEEF-MILK GIVERS-BEAST OF BURDEN



H&B Farm Dexters
Felicia Hall & Rod Birdsell
R.R. 2 Box 54
Beatrice, NE 68310
(402) 223-4297

FOR SALE: Good selection of registered cows,
heifers, and calves.

Registered Dexter cattle. Cows, bulls, and calves.

Elmer E. Templeton
Rt. 1, Box 65
Fleming, OH 45729
(614) 373-4892



Smiling Papa Johnson Ranch

Registered American Dexter Cattle

Marvin B and DeLois K.
P.O. Box 441 - Elkhart, KS 67950

Phone - 580-696-4836 email: papajohn@elkhart.com

Specializing in the
original horned cattle.
Choice breeding stock,
prices upon request.
Breeding for the ultimate in
conformation.

SMILING PAPA JOHNSON, DEXTER CATTLE BROKER

LET ME HELP WITH YOUR CATTLE NEEDS

SELL YOU CATTLE THAT I RAISED,
BUY YOUR CATTLE TOP PRICE PAID

TAKE CATTLE TO SELL, ON CONSIGNMENT FOR 10%
COMMISSION. FIND YOU CATTLE TO FIT YOUR
NEEDS, FOR A 10% FINDERS FEE.

WILL PICK UP AND DELIVER ANYWHERE IN THE USA
FOR \$25.00 PER HOUR DRIVING TIME ONE WAY.
WILL WORK YOU IN ON SPLIT LOADS, ONE HEAD OR A
TRAILER LOAD.

Dexter Cattle For Sale

FOR SALE OR TRADE

BEAUTIFUL BLACK POLLED (dehorned) BULL, KING'S JESTER #5840. Long body, has produced outstanding calves. Will trade for comparable bull.

ALSO FOR SALE: Bred cows, heifers and bull calves. Black and red/dun with horns and polled. Several to choose from.

Edward C. Browning
1176 Post Road
Wakefield, RI
401-783-9239
Photos Available

Red/dun weanling (July 1998), short legged, son of Rhea of Sunshine, out of small red/dun cow. For sale or trade.

Mark Hensley
(712) 764-8272
2628 800th St.
Elk Horn, IA.

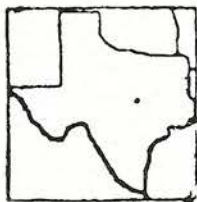
For Sale:

Polled, (Cherry) Red/dun, 2 year old Platinum Grandson; also 6 excellent proportionate young cows bred to same.

Twi-Lite Dexters
5016, 54th Ave
Taber, A.B. Can.
T1G 1M2
Phone: (403) 223-4694

Texas Registered Stock

Both Types of Registered
Dexter Stock Usually Available
For Sale



We need more breeders in Texas. Therefore, if we don't have the animal you want, we will help you find it from our Texas Breeders.

Briscoe's DBL D Stock Farms

Doyle & Delmoreen Briscoe
8218 W. FM 93
Belton, Texas 76513
254-939-6016

REGISTERED DEXTER CATTLE



DOG RUN

on the Shenandoah River in Virginia

Larry Higgins & Gwen Casey-Higgins
4533 Lockes Mill Road, Berryville VA 22611
(540) 955-4421

BLACK AND RED/DUN STOCK

CALIFORNIA

BULL FOR SALE:

Glenn of Green Valley, #5935
D.O.B. 4-13-93, black, horned,
41", 975 pounds, halter broke

**CHAMPION DEXTER BULL AT THE 1996,
1997 AND 1998 CALIFORNIA STATE FAIR**

*Other Quality Registered Dexter
calves, bred cows & heifers,
bulls and semen also available*

Bill and Dusty Kirkland-Green River Ranch
8636 Berry Road, Wilton, CA 95693
(916) 687-7986 evenings and weekends

QUALITY REGISTERED DEXTER CATTLE MONTANA BRED & HARDY

Cows (Black & Red, Horned or Dehorned)
Black Yearling & Heifer Calves
Small, Muscular, Bull Calves

JD Rich, Sheridan, Montana 59749
406-842-5687 gjfarm@3rivers.net
<http://www.angelfire.com/mt/gjfarm>

HI-COUNTRY ACKERS

Registered Dexter Cattle

749 24 3/4 Road Carol Ann Traynor
Grand Junction, CO 81505 (970) 241-2005 - voice mail
gentle cattle - handled daily
1999 calves available

"You're welcome to visit!"

Call or write for current information.
**BARN & BED for travelers
with or without their Dexters!**

Dexter Cattle For Sale

P.O. Box 850502
Yukon, OK 73085

W. Mike & Deann Ross
(405) 373-2733
email: dross@telepath.com

FAIRGROVE FARM

Registered Dexter Cattle. 98-99 heifer & bull calves for sale. Black, horned, petite with good conformation. Consider trade for exceptional black herd bull prospect.

Herd liquidation sale!

Registered Dexter cattle. 4 cows, all less than 4 years old. 1 bull approx. 3 yrs. old. 1 red/dun bull at 1½ years old. 2 bull calves, this spring's. All cattle are hearty and well mannered. Two cows were once broken in ox yoke. Older bull has been led. One calf is exceptionally small.

Andrew A. Arnold
Route 1, Box 112
Fleming, Ohio 45729
(740) 749-3693

For Sale:

3 Dexter heifers, 1 black, 2 red/dun.

WINDSWEPT ACRE
Clayton & Beverly Harrington
463 Hopkins Mill Road
Quarryville, PA. 17566-9258
(717) 786-1746
email: WSAcre@aol.com

REBOUND FARMSTEAD OFFERS FOR SALE:

Two yearling black, horned, long-legged, registered Dexter heifers.

One two year old black, horned, long-legged, registered Dexter heifer.

One three year old black, horned, long-legged, registered Dexter cow.

Rebound Farmstead
16578 West 81st Street South
Sapula, Oklahoma 74066
Phone: (918) 227-4756 or (918) 224-7182

From the Editor

We've had a compilation of technical problems that have caused the Bulletin to fall way behind schedule and while the hope is this issue will be out before the AGM, it's possible that it might not be and some of the material may be dated. While it wouldn't be appropriate here to mention all the disasters in publishing this in a timely manner, we believe that they are all resolved at the moment although some adjustments may be needed to get back on schedule. I just recently replaced and updated all of my own equipment that I use to put this together so that should solve any more delays that were due to the computer being in the shop for repairs.

My apologies to any advertisers that may have been inconvenienced due to the delays but be assured that if you've paid for six issues your ads will appear in six. Since our deadline is out of whack at the moment anyone wishing to advertise should go ahead and send in their ad and it will appear in the first available issue.

While I understand that everyone enjoys receiving a newsletter every two months this does create certain problems with deadlines, cost and limits to the size of a publication, which is why most generally, publish quarterly. Some of these problems I'm sure will be addressed at the upcoming AGM by the Board and the general membership and so in the next issue everyone should have an idea of what direction is decided upon to take with the Bulletin.

Hopefully this will be the last time I'll have to make excuses for the Bulletin being late although I have nothing to do with the mailing of the newsletter. Please be sure that if you've had a change of address due to moving or 911 that you send your new address to Rosemary so that the association can keep your mailings current. Also, it's necessary and helpful in some localities if we have your full nine number zip code. Remember that every issue begins with blank pages and so your contributions of articles and photos are greatly appreciated and are what forms the character of each newsletter. I'd like to thank Carol Traynor for her pointers on how to take good photographs of our Dexters and to Carol Davidson for providing information regarding color. For anyone that does own the true red Dexter, I'd appreciate you sending me some photos that I could publish for the benefit of members that have not had the opportunity to view them before, other than the one published in the Bulletin of Cinnamon from the World Dexter Congress.

Thanks again for your patience!

Richard Henry, Editor



Dexter Semen For Sale

Collected by COBA/Select Sires from Jamie O'Callen, #1949. Black, proportionate type. Excellent disposition, 42" tall @ 39 months.

Briar Hill Farm
James G. Johnson
4092 Broadview Rd.
Richfield, OH 44286-9605
(330) 659-4861

Limited amount of semen available from Rhea of Sunshine, #4588. Red/dun, 38 1/2" tall, 670 lbs. @ 4 yrs. High proportion of heifers. First come, first serve. \$20 per straw plus s & h.

Rainbow Hills Dexter Farm
Rt. 13, Box 75
Poplar Bluff, MO 63901
(573) 785-2719

Collected from Glencara Paddy, #3864 EX. Black, 44 1/2" tall, 1050 lbs. @ 4 yrs. \$15 / straw + s & h. Note his offspring do not carry EX.

Evelyn Colclough
10418 16th St. East
Edgewood, WA 98372
(206) 927-4608

PROVEN QUALITY



BEDFORD ROMARC RAMBLER #5449

Evaluation Score 93.5%. \$20 US/straw + s&h
black, 39" @ 18 mos. \$25 CDN/straw + s&h



CORNSHAIR OUTLAW #6703

Evaluation Score 85%. red, 44" @ 4 years.
\$35 US \$45 CDN 1-5 straws + s&h
\$30 US \$40 CDN 6 or more straws + s&h



SALTAIR PLATINUM #6504 POLLED

Evaluation Score 85%.
black with recessive red, 42" @ 3 years
\$40 CDN/straw + s&h



RIVERHILL SATURN'S GALAXY #5255

Evaluation Score 82.5%. \$20 US/straw + s&h
black, 43" @ 4 years \$25 CDN/straw + s&h



WEE GAELIC MR. O'TOOLE #5741

Evaluation Score 81%. \$20 US/straw + s&h
dun, 45" @ 4 years \$25 CDN/straw + s&h

These bulls are guaranteed free of dwarfism. Colour has been confirmed by DNA typing. All have good temperaments, long bodies, deep frames and have produced outstanding calves.

BRIGHT MEADOWS STOCK FARM Carol Davidson
RR #1 Ladysmith, BC Canada V0R 2E0
Phone: (250) 245-4046 Fax: (250) 245-7474

Collected from Anton of Mt. Carmel #2871

Red/dun 40 1/2 " tall, 8 yrs. old and 975 lbs. Proportionate, long bodied, fleshy. Producing clean - uddered heifers and fleshy bulls. \$15 a straw.

Philip R. Martz
1229 Leister Rd.
Fairhope, PA 15538
(814) 267-5052

DEXTER



A.I. Bull

REVIEW

A comprehensive collection of facts, statistics & extended pedigrees, with a photo (where available) of each bull and in many cases, additional photos of precursors and progeny. Evaluations are included where owners have given their permission.

\$15 CDN /\$12 US includes shipping & postage

BRIGHT MEADOWS STOCK FARM

Carol Davidson
RR #1 Ladysmith, BC Canada V0R 2E0
Phone: (250) 245-4046 Fax: (250) 245-7474

Information

Books For Sale

The Life and Times of Dexters

by Ted Neal

A full color book about Dexters direct from England.
\$27.50 check or money order.

Dexter Cattle

by John Hays - USA

\$7.95 per copy, plus \$1.55 postage and handling.

The Dexter Cow and Cattle Keeping on a Small Scale

by Dr. William Thrower - England

\$9.00 each, postage paid.

Kerry and Dexter Cattle and other acient Irish breeds

A history

by Patrick Leonard Curran

Out of stock, no longer available.

Please order all books from:
**Rosemary Fleharty, Secretary
American Dexter Cattle Association
26804 Ebenezer
Concordia, MO 64020**

Sales requirements for semen

Advertising pertaining to the sale of semen in the **Bulletin**, requires one to state the height of the bull from the shoulder to the ground and the age at which the height was recorded. The bloodtype for any bull being used out-of-herd A.I. must be on file with the ADCA.

Annual Meeting



**Wichita, Kansas
July 16, 17, & 18th.**

Advertising

Classified advertisements of Dexter cattle or Dexter semen is \$5.00 for up to a 2" column ad or \$25.00 per year for six issues. Ads over 2" up to 4" are \$10 per ad or \$50.00 per year for six issues. All ads are limited to Dexters exclusively and subject to approval by the ADCA. Make all checks payable to the American Dexter Cattle Association. Please submit payment with your ad and send to:

17409 E. 163rd St.

Lee's Summit, MO 64082

All transactions are between buyer and seller. The Association trusts both will use their own good judgement and exercise the highest of integrity.

The Dexter Bulletin

The **Bulletin** welcomes articles and letters from the membership. Those published may be edited for length and clarity.

The reviews and opinions expressed in the **Bulletin** are those of the authors and may or may not agree with the American Dexter Cattle Association. The Association assumes no responsibility for technical data published by independent authors.

Send letters and articles to the editor:

Richard Henry

17409 E. 163rd St.

Lee's Summit, MO 64082

email: R_Haze@compuserve.com

Fee Schedule

Cost of Registrations:

Cows up to 1 yr. old	\$20.00
Bulls up to 2 yrs. old	\$20.00
Cows over 1 yr. old	\$40.00
Bulls over 2 yrs. old	\$40.00
Animals from A.I. sires add	\$1.00

Cost of Transfers:

Regular transfers	\$20.00
Inner-herd transfers	\$10.00
Registration and transfers for non members	\$100.00
New membership (owning registered Dexters)	\$30.00
Associate membership (not owning Dexter cattle)	\$30.00
Annual renewal (for all memberships)	\$20.00
Subscriber (Bulletin only)	\$10.00
Names for registration cannot exceed 21 characters	
The tattoo code letter for 1999 is "J"	



Dexter calves at Jim Moody's farm in North Carolina. Photograph courtesy of Kathy Smith.

The Dexter Bulletin Mar. / Apr.

Richard Henry, Editor
17409 E. 163rd St.
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