March 2011
Volume 68, Issue 1
Editor: Katrin Becker

Southern Alberta Rabbit Breeder's Association

Established in 1944

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HAPPY SPRING!

Welcome to SARBA's 68th year as an association! Our new executive is already busy trying to get things organized for the coming year and as usual, the first order of business is to thank the outgoing executive for all their hard work in 2010. I'd like to especially thank **Steve for travelling so far to the meetings.** Without your hard work, this club could not function.

We don't have any new faces this year, and our executive has shrunk a bit. Here's hoping this is not a trend. Let's see this year turn into a very active one for the Club. Remember the Club is only as good as its membership so if you want the club to do more, come on out and help!

Our annual show is fast approaching and it looks to be a great event again! I will be taking over from Leona as Show Secretary this year. Leona has done such a fantastic job as Show Secretary - I hope I can do half as good a job as she did. Try and be patient with me as I learn the ropes.

The Calgary Pet Expo was this past weekend and SARBA had a booth that was very well attended. THANKS to all who helped out. Events like this can be very important in helping to promote the rabbit fancy.

Well, that's all for now, so until next time...

HAVE A GREAT EASTER EVRYONE!

Katrin

~~~~~~~~ Upcoming Events ~~~~~~~

NEXT MEETING:

Sun. April 3
at
Chestermere Rec Centre
at
2:30 p.m.

Meeting Dates 2011
(tentative)

- Sun. June 5 at Chestermere Rec Centre at 2 p.m.
- no August meeting planned
- Sat. Sept. 17 Chestermere Fall Fair
- [AGM] Sat. Nov 5 at Chestermere Rec Centre at 2:00 p.m.- AGM

SHOWS:

SARBA Spring Show

Specialty Shows Friday May 6, starting at 6:00 p.m.
Triple Open Show Saturday May 7 starting at 8:30 a.m.

There are also a number of shows in Montana, and elsewehere coming up. Check your Domestic Rabbits magazine or go to the District One website: http://www.arbadist1.com/shows.htm

Coat Colour Genetics, Part 3: The E-Series by Katrin Becker

normal castor (above)

steel castor (below)

Below: a blue tort with very little shading looks orange

below: lynx in front and lilac tort behind

note the lack of ticking and ring definition in the tort

This broken castor shows the spotting of a tri.

E stands for *extension*. It can result in some of the most confusing colours. This gene controls how the pattern and colour are expressed along the shaft of the hair. It mainly affects the black pigment in the hairs. The **E** is unique in that there are 2 variations that are dominant over the normal wild gene (**E**). There are 5 alleles: $\mathbf{E^d}$ (Dominant black) is rarely seen. It causes an abundance of black pigment and can make an Agouti look like a self. $\mathbf{E^s}$ (steel) also causes an abundance of black but it leaves the surface ticking. I once bought an otter buck who, according to the pedigree, was out of two black parents. Genetically, this is impossible because self (**aa**) is recessive to otter (**at-**) so the only colours they should have been able to produce were selfs. After looking at some of the ancestors, I figured out that the doe, a registered black *must* have been a steel otter and the steel gene was hiding all of the tan markings. Fortunately with dominant genes you will almost always be able to see their effect and so if they are genes you don't want then getting rid of them from your lines is relatively straight-forward.

E is the normal extension and allows the other (**A**, **C**) genes to be expressed normally.

$\mathbf{e^j}$ (japanese) is responsible for harlequins and tri-colours. It breaks up the black and yellow pigment in the hair into patches rather than spreading it along the hair shaft. On a solid rabbit it produces the familiar harlequin pattern. On a broken rabbit it results in dark spots (black, chocolate, blue, or lilac, depending on the **B** and **D** genes) on an orange (**D-**) or fawn (**dd**) background.

The japanese gene can cause a lot of trouble though because it is only partially recessive to **E**. In other words, **E** has incomplete dominance over $\mathbf{e^j}$ and when those two are combined the brindling will show through on all but a self rabbit (see photos).

Notice the muddy looking light parts on the $\boldsymbol{Ee^j}$ *otter below compared to the normal otter above. She is* $\boldsymbol{Ee^j}$

Below is a normal tri.
A- B- C- D- $\boldsymbol{e^j}$***- Enen***

The fifth gene in the series is recessive to all of the others *most of the time*. It is called non-extension and is represented as **e**. The **e** removes almost all of the dark pigment and is the one you need to produce a tortoiseshell.

In full colour Agoutis (**A - C**), it produces reds, orange, fawn, and cream (although without the wideband gene to extend the mid colour you will often still see smut). In full colour selfs (**aa - C**) it produces torts, and in shaded animals ($\mathbf{C^{chl}}$) it results in sable points.

Even though it is recessive, there is one case where **e** can still be detected even when combined with a gene that is dominant to it and that is $\mathbf{e^je}$. When this pair is combined with a broken coat (**Enen)** *and* a self pattern (**aa**), you end up with a 'torted tri'. These rabbits will show BOTH the tort shading AND some spots.

This is a blue torted tri. If you look closely you can see he has a few spots. He is out of a broken chocolate and the 'harle' otter pictured left. His genotype is: ***aa Bb C- dd*** $\boldsymbol{e^je}$ ***Enen****.*

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What We Can Learn from Test Breeding

There is a lot that can be learned from test breeding, however, it is usually only used to test for the presence of easy to identify traits - typically those that are determined by a single gene. People don't usually test breed for type - developing type is a much slower process and can take your whole career.

Test breeding is used to determine if a particular animal is carrying a particular colour or some other recessive trait. Curiously, we often test breed for colours when we are looking ***for*** a colour we want, but we test breed for other traits (like wolf teeth or split penis) when we are looking to ***eliminate*** something we DON'T want.

When you do a test breeding, you will always have one parent who either shows the trait or you KNOW is carrying it. Breeding two animals together when you don't know if EITHER of them is carrying the trait you are looking for may turn up nothing for a long time.

Continued on last page....

Essential Tools

What are you essential tools around the rabbitry?

Anyone who has been raising rabbits for more than a few years will have tried all kinds of tools to help them do their daily chores. Of course there are essentials like nail clippers and tattoo kits, but what about those handy little items that, once you try them, you wouldn't want to be without? Let us know yours.

Here's one of mine: a long handled wall scraper.

I find it indispensible when cleaning cages. It is not so sharp as to cut through things but it is strong enough to pry off the most stubborn dried on muck. I use it to scrape the dropping pans under my inside cages as well as for scraping wire and for prying loose those clumps of muck that sometimes build up in outside hutches.

Quick and Easy Nestboxes

For anyone who does not keep their rabbits in a heated barn or in the house I always recommend wooden or plastic nest boxes - with lids. Our weather is unpredictable at the best of time so it is important that the nest boxes provide sufficient shelter from the cold and other elements.

An easy way to make a good nestbox is to buy one of those plastic tote bins and cut a hole in one side. Stuffed with hay and with the lid on it turns into a cozy nest box. I use the 15" X 24" X 8" ones for my Rex. My inside cages are 36" X 30" so this still gives the does plenty of other room. One caution though: make sure any tote you buy will fit in through the cage opening.

To turn it into a nestbox, I simply cut a hole high enough to create a lip at the bottom so the kits won't fall out and so they won't get dragged out when the doe leaves the box.

I've often been told that nestboxes should be just big enough for doe to turn around in but I prefer to give them more space and it has worked out well for me. The totes are easy to remove when you want to check on the kits and they are completely scrubbable. The solid lid gives the doe a place to get away from the kits when they start venturing out.

Some does will chew the plastic so these boxes have a limited lifespan but you can make them last longer by only putting them in a few days before she kindles and then removing them when the kits are 3-4 weeks old.

Over all, I prefer my wooden nest boxes for durability, but the plastic ones are quick and easy so they can really come in handy if you find yourself short of nestboxes and you have a doe due.

The Southern Alberta Rabbit Breeders Association

and the

Chetermere Regional Agricultural Society

are pleased to present

Three Official ABRA Scantioned All Breed Shows on Saturday May 7, 2011

Judges: Cliff Dick, Charmaine Rudolph, Cathy Armstrong

~AND~

Three ARBA Sanctioned Specialty Shows on Friday, May 6, 2011

Holland Lop
Polish
Rex

Show Secretary:

Katrin Becker (403) 932-6322, Cochrane, AB, info@sarba.ca

Show Catalog: Tony Berry (403) 569-2512, Calgary, AB bearbunzrabbitry@shaw.ca

Silent Auctions: Chris Berry (403) 569-2512, Calgary, AB bearbunzrabbitry@shaw.ca

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Southern Alberta Rabbit Breeders Association Membership Application and Dues (2011)

1 year:	ADULT: $18.00	YOUTH: $12.00	FAMILY: $25.00
3 years:	ADULT: $48.00	YOUTH: $30.00	FAMILY: $60.00

MEMBERSHIP IS FOR ONE (1) YEAR, RENEWABLE IN JANUARY OF EACH YEAR. NEW MEMBERS JOINING AFTER JULY MAY PAY HALF THE YEARLY DUES.

I hereby make application to and agree to abide by the constitution and bylaws of the Southern Alberta Rabbit Breeders Association. I understand that said membership includes a quarterly copy of the club newsletter and all privileges and benefits of the Association.

Please check one in each column:

[ ] New	**[ ] 1 Year**	**[ ] Youth**
[ ] Renewal	**[ ] 3 Years**	**[ ] Adult**
		[ ] Family

Date: _____

Name: _____ **Birth date (if under 18):** _____

Address: _____

City: _____ **Province/State:** _____ **Postal Code:** _____

Phone: _____ **A.R.B.A. Membership #:** _____

Email address: _____

Web site address: _____

Rabbitry Name: _____

Breeds raised: _____

Recommended by: _____

Please make your cheque or money order payable to the

Southern Alberta Rabbit Breeders Association (S.A.R.B.A.)

and send it with your application to:

SARBA, Ruth Blazenko
4724 Nelson Road N.W.
Calgary, Alberta, T2K 2L6

S.A.R.B.A 2011 Executive

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- Club Historian

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We're on the Web!

See us at:

www.sarba.ca

What We Can Learn from Test Breeding, *continued*

Since we are looking to see if a particular rabbit is carrying a specific recessive gene, we will want to breed to a rabbit who is KNOWN to carry that gene. Of course, if we are trying to see if this rabbit is carrying the genes for wolf teeth for example, we would NOT breed from an animal that actually HAS wolf teeth. For that matter, you probably shouldn't even keep any rabbit that is known to carry undesirable traits. If this is your reason for test breeding then you would breed related animals of the line you suspect has the trait. If it turns up in the litter, then BOTH parents should be eliminated from your breeding program.

If you are looking for certain colours though, things are different. In that case you should breed your 'test animal' to one that has both copies of the gene you are looking for. For example, if you are looking to see if a doe is carrying chocolate, then breed her to a chocolate. If she produces even ONE chocolate baby you know for certain she is carrying that gene. Beware though: genetics is a numbers game. If you breed a suspected chocolate carrier (**B?**) to a chocolate (**bb**) it is possible for the entire litter to come out black (**Bb**). That is because the likelihood of producing a chocolate from this mating is 50/50 - but that likelihood applies to EACH kit, NOT to the litter as a whole. Just like it is possible to toss a coin 100 times and for it to turn up heads every time, it is possible for each kit to end up black. Still, chances are good that you will end up answering your question - and you are much more likely to be able to answer your question if you breed to an animal that is homozygous (i.e. has both copies of the same gene) for the trait you seek than if you breed to one who is heterozygous.

There are a few animals that can be particularly useful in a test breeding, and those are the ones who carry the most recessive genes. A lilac self, for example, is homozygous recessive for almost everything: it is **aa bb C- dd E-**. You can use it to tell if another animal is carrying self, chocolate, OR dilute. A lilac tort (or crème) takes it one step further: it is **aa bb C- dd ee**.

Another animal that can be valuable for test breeding is a red-eyed white (albino). It carries **cc** on the colour locus and that means that ANY non-white babies are showing the **C**-gene from the test parent. Have a castor and want to know if it's carrying chinchilla? Breed to a white. Do you suspect your otter is carrying Californian? Again, breed to a white. It is important to remember though that REW is the result of the **cc** gene, which *removes all colour*. The white is effectively HIDING the actual colour. That means you will have no way of knowing what else the white is carrying (unless you know the genetic make-up of the parents). If you want to know what your REW is carrying.... breed it to a lilac!

Many pedigree programs let you track colours so start tracking your colours and have fun!

SARBA Newsletter Editorial Policy

The SARBA Newsletter is a quarterly publication of the Southern Alberta Rabbit Breeder's Association dedicated to the advancement of the domestic rabbit and the domestic rabbit breeder. SARBA reserves the right to refuse to accept for publication any advertising or articles which it deems are not in the best interest of members. Lengthy articles may be edited.

Articles, statements or opinions published may not necessarily be those of SARBA, and are the sole responsibility of the author.

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