

NEW BRUNSWICK
APPALOOSA HORSE CLUB



SEPTEMBER 2010 NEWSLETTER



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In order to save time and money, we have decided to email most of the Newsletters to our membership. For those of you that would prefer to receive the Newsletter by mail, please advise me by sending me a note either by email at kimberlyderrah@hotmail.com or Canada Post.

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*Kim Derrah
1638 Rte. 890
Newtown, N.B.
E4G 1N4*

DEADLINE FOR DECEMBER 2010 ISSUE: November 30, 2010

***Note:** Anything you wish to advertise may be put in the newsletter – it is not limited to horses only. So, if you have any tack items, pets, etc. you wish to advertise, please feel free to do so. **Ads for Members are free of charge.**

INTERNET DIRECTORY

If you wish to have a website added to the list below, please get in touch with Kim Derrah at kimberlyderrah@hotmail.com

ApHCC.....www.appaloosa.ca
NBAPHC.....www.nbaphc.com
ApHC.....www.appaloosa.com
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Membership forms for the ApHCC, NBAPHC, and ApHC can be downloaded from their websites.

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Editor's Note September 2010

Well another Show Season is coming to a close and I would like to congratulate everyone that participated and put in a good showing. Remember winning isn't everything – having fun and good sportsmanship is what matters most. Not everyone can win first place and like people, horses can have bad days too. So give them a hug and an extra apple and tell them they did a good job even if you thought they could have done better. I would like to thank all members who helped collect donations for the show as well as all of our Sponsors who made such generous donations. And a great big thank you to the Show Committee for making our Show a success and run smoothly and to all our members who attended. We couldn't do it without you!

Our annual Meeting and Awards Banquet are coming up in November and I have attached a Notice for same and hope everyone can attend. It is going to be at the Timberland this year and of course there is no doubt that we will be fed well and the food will be awesome! Don't forget to bring your items for the live auction to help support our club! As you know, every little bit helps.

On a more serious note, if you are a National member, you are probably aware of some Motions being voted on at the Annual Meeting to be held on November 6, 2010 in Belleville, Ontario. One Motion in particular I think is very important to the Appaloosa Breed and pertains to HYPP (Hyperkalemic Periodic Paralysis). As most of you may or may not know, this disease originates from one Horse who was an Appendix American Quarter Horse known as "Impressive". I have included some information in this Newsletter about the Stallion "Impressive" as well as an article from the University of California Veterinary Genetics Laboratory which outlines what HYPP is and how it affects horses and what happens when a negative HYPP horse is crossed with an HYPP horse carrying the gene. I believe that power is knowledge and by including these articles it will help our members a bit more on the subject to allow them to make an informed decision on how to vote in this matter.

Winter is coming soon so get as much riding in as possible and enjoy the Fall colors while you can. Hope to see you all at the Annual Meeting and Banquet.

Apps Rule!

Kim Derrah
Newsletter Editor



Following is an item taken from the Internet from “Wikipedia”.

IMPRESSIVE

“Impressive” (1968-04-15/1995-03-20) was born an Appendix America Quarter Horse; however, earned his full AQHA registration in 1971. He was the 1974 World Champion Open Aged halter stallion, the first such World Champion in his breed, despite carrying only 48 halter points in total. He is famous for his highly successful progeny, having sired 2250 foals. Nearly thirty of his offspring went on to be World Champions themselves.

Impressive is also notorious as the primary source of the widespread genetic disease known as Hyperkalemic Periodic Paralysis (HYPP). In his showing days, Impressive changed hands a number of times, perhaps his most famous owner being Dean Landers, who also owned the famous halter stallions Two Eyed Jack, Coy’s Bonanza, and Sonny Dee Bar. Although Impressive raced for a short time after Landers sold him to Fennel Brown, he was quickly excluded from any performance discipline due to pedal osteitis, leaving halter as his only choice. His groundbreaking 1974 World Championship soon cemented his role in that discipline. Each time Impressive was resold, his price rose quickly; at one point, an offer of \$300,000 for him was refused by Brown, who said “ain’t nobody in this world got enough money to buy this horse”.

Impressive was highly sought after for breeding despite at one time carrying the outrageously high stud fee of \$25,000.00. He sired a total of 2250 foals and as of 2003, was estimated to have in excess of 55,000 living descendants. He was bred for his muscular and refined form, which was passed on to his get often enough to make him at least the #5 all-time leading quarter horse sire when ranked by AQHA points earned by all progeny combined. Perhaps his greatest foal is Noble Tradition, a four-time World Champion stallion in halter, who has gone on to be a highly successful sire himself.

Although Impressive was not known to have exhibited any symptoms of the disease himself, gradually it became evident that many horses tracing back to Impressive were afflicted with the painful, alarming, and often fatal disease Hyperkalemic Periodic Paralysis (HYPP). Further, it has never been observed in horses not descendants of his line. HYPP is a dominant gene, and as such, all animals with even one copy of the gene, identified as “N/H”, will exhibit some symptoms of the disease. Horses with two copies, identified as “H/H”, will always pass on the condition, and research suggests that H/H horses may have more severe symptoms than N/H horses.

After a number of years of debate, effective since January 1, 2007, the AQHA amended rule 205(c)(3) and Rule 227 (e) to require all descendants of Impressive to be tested prior to being registered and ban from registration all horses born after January 1, 2007 with HYPP genetics confirmed by DNA testing to be homozygous for the condition (H/H). Horses heterozygous for the condition (N/H) may still be registered at present as of 2009.

Other breed registries that accept animals with Quarter Horse bloodlines, including the American Paint Horse Association and the Appaloosa Horse Club, have yet to bar such animals. There is currently a widespread effort among many breeders to eliminate the disease by selective breeding but there are those who continue to breed without regard for it, seeking muscular enhancement correlated with it and in doing so perpetuate the disease's existence.

Following is an article taken from the website of UC Davis Veterinary Genetics Laboratory, a division of the University of California:

Hyperkalemic Periodic Paralysis (HYPP)

Introduction

Hyperkalemic periodic paralysis (HYPP) is an inherited disease of the muscle, which is caused by a genetic defect. In the muscle of affected horses, a point mutation exists in the sodium channel gene and is passed on to offspring.

Sodium channels are "pores" in the muscle cell membrane which control contraction of the muscle fibers. When the defective sodium channel gene is present, the channel becomes "leaky" and makes the muscle overly excitable and contract involuntarily. The channel becomes "leaky" with potassium levels fluctuate in the blood. This may occur with fasting followed by consumption of a high potassium feed such as alfalfa. Hyperkalemia, which is an excessive amount of potassium in the blood, causes the muscles in the horse to contract more readily than normal. This makes the horse susceptible to sporadic episodes of muscle tremors or paralysis.

This genetic defect has been identified in descendants of the American Quarter Horse sire, **Impressive**. The original genetic defect causing HYPP was a natural mutation that occurred as part of the evolutionary process. The majority of such mutations, which are constantly occurring, are not compatible with survival. However, the genetic mutation causing HYPP produced a functional, yet altered, sodium ion channel. This gene mutation is not a product of inbreeding. The gene mutation causing HYPP inadvertently became widespread when breeders sought to produce horses with heavy musculature. To date, confirmed cases of HYPP have been restricted to descendants of this horse.

Symptoms and Signs of the Disease

Homozygous horses are affected more severely than heterozygous horses. Under ideal management practices, the defective gene does not appear to have adverse effects, but stress and/or increased potassium in the serum can trigger clinical signs of muscle dysfunction. Why some horses manifest sever signs of the disease and others exhibit little or no signs is unknown and currently under investigation. Unfortunately, a horse carrying the defective gene but showing minimal signs has the same chance of passing the gene to future generations as does the affected horse with sever signs.

Attacks of HYPP can take various forms and commonly have been confused with other conditions. Because of the muscle tremors and weakness, HYPP often resembles

exertional rhabdomyolysis (“tying-up” syndrome). “Tying-up” syndrome can be caused by many different circumstances, including exercising a horse beyond the capacity to which it has been trained, as well as nutritional deficiencies and metabolic diseases. A distinguishing feature of HYPP from “tying-up” syndrome is that horses usually appear normal following an attack of HYPP. Horses with “tying-up” syndrome, on the other hand, tend to have a stiff gait and painful, firm muscles of the hind limbs, rump and/or back. “Tying-up” syndrome is also generally associated with some type of exercise. HYPP, by contrast, is not usually associated with exercise, but occurs when horses are at rest, at feeding time, or following a stressful event such as transport, feed changes, or concurrent illness.

Because a horse may be down and reluctant or unable to stand during an HYPP attack, many owners have thought their horses were experiencing colic. HYPP has also been confused with seizures due to the pronounced muscle trembling and collapse. Unlike seizures and other conditions that cause fainting, horses with HYPP are conscious and aware of their surroundings during an attack and do not appear to be in pain. Respiratory conditions and choking have also been confused with HYPP because some horses make loud breathing noises during an attack.

Causes of an Attack

Environmental factors can actually cause an attack of muscle weakness. Owners of HYPP – positive horses should be aware that external stimulus and events could increase the chance of paralysis onset. These factors include dietary changes, fasting, general anesthesia, and concurrent illness and exercise restriction.

Prevention and Control of HYPP Attacks

Dietary management is extremely important in the management of affected horses. Dietary adjustments include (1) avoiding high potassium feeds such as alfalfa hay, brome hay, canola oil, soybean meal or oil, and sugar molasses and beet molasses, and replacing them with timothy or Bermuda grass hay, grains such as oats, corn, wheat and barley and beet pulp; (2) feeding several times a day; and (3) exercising regularly and/or being allowed frequent access to a large paddock or yard. Due to the high water content of pasture grass, a horse is unlikely to consume large amounts of potassium in a short period of time if kept on pasture. If the horse is experiencing problems on its present diet, it is recommended to feed a diet containing between 0.6% and 1.5% total potassium concentrations.

Several drugs have been used for prevention of clinical episodes of paralysis. Horses have been treated with either acetazolamide (2-4 mg/kg orally, every 8 to 12 hours) or hydrochlorothiazide (0.5 – 1 mg/kg orally, every 12 hours) with apparent success. These agents exert their effects through different mechanisms; however, both cause increased renal potassium ATPase activity. Acetazolamide has been shown to stabilize blood glucose and potassium by stimulating insulin secretion. Breed registries have restrictions on the use of these drugs during competitions (some require a veterinary certificate).

Inform your Vet of the HYPP condition prior to any general anesthesia, as this may precipitate an episode of paralysis. If your horse is receiving medication, maintain him or

her on therapy before and after surgery or anesthesia. Use common sense while hauling and be sure to stop and water horses frequently (every 2 hours). During a severe attack of HYPP, emergency treatment from a Vet is necessary. For long term therapy, many horses can be managed by exercise and diet control alone. Regular exercise and access to a large paddock or pasture is preferred over stall confinement. Maintain a regular feeding schedule, preferably equally spaced, two to three times per day. Avoid rapid changes in feed, such as bringing a horse off pasture grass and immediately switching to alfalfa hay. Most horses improve when the potassium content in the diet is decreased.

Inheritance and Transmission of HYPP

HYPP is inherited as an autosomal dominant trait, which means it can occur in both males and females and only one copy of the gene is required to produce the disease. The trait is inherited from generation to generation with equal frequency; **it does not get “diluted” out or skip generations.** Breeding an affected heterozygous horse (N/H) to an affected heterozygous horse (N/H) will result in approximately 50% carrying the defective gene (N/H), approximately 25% will be normal (N/N) and approximately 25% will be homozygous carriers (H/H). Breeding an affected heterozygous horse (N/H) to a normal horse (N/N) will result in approximately 50% normal offspring and approximately 50% carrying the defective gene (N/H).

Expected Breeding Outcomes

N/H x N/H have 25% chance of producing normal offspring, 50% chance of producing heterozygous carriers and 25% chance of producing homozygote offspring.

N/H x N/N have 50% chance of producing norm (N/N) offspring and 50% chance of producing carriers (N/H).

Breeding an affected homozygote (H/H) will result in all offspring carrying the defective gene regardless of the status of the other parent.

Myths about HYPP

Some people have felt that the disease can be diluted out and not carried to distant generations. This is FALSE because an affected horse has just as much chance to pass on the trait as the affected parent, which passed on the gene to him/her. Some people also believe the horse will “grow out of it”. This is not true. For unknown reasons, attacks of HYPP tend to occur most often at the beginning of intense training and fitting for shows (age three to seven years old). It is important to realize that horses with HYPP are affected for life. It is possible that older horses do not experience the same conditioning stresses as young horses or owners have discovered the best management strategies for the older horses with HYPP.

Which Horses Should be Tested for HYPP

As noted above, the DNA based test for HYPP identifies the specific genetic mutation, which we now know, exists in descendants of “Impressive”. We presently do not know whether different genetic mutations in other bloodlines also cause HYPP, and the DNA

test will not identify other such mutations. Further scientific research is required as to other bloodlines. We presently recommend that all descendants of “Impressive” be tested for diagnostic, treatment and breeding purposes.

*New Brunswick Appaloosa Horse Club
2010 Directors and Executive*

Carol Hill, President
50 Starview Street
Fredericton, N.B.
E3C 1R3
carolhill@gnb.ca
(506) 452-1535

Leonard Dunfield
1082 Green Road
Elgin, N.B.
E4Z 1V5
ldunfield@aronvalleyfloral.com
(506) 756-2666

Ron Groundwater, Vice-President
1301 Route 6, RR#4
Amherst, N.S.
B4H 3V2
sueh20@hotmail.com
(902) 661-0321

Gail Melanson
139 Plumweseep Road
Plumweseep, N.B.
E4G 1X7
jgmelanson@msn.com
(506) 433-9303

Jen Hazen-McNamara, Secretary
102 Horton Lane
Penobscuis, N.B.
E4G 2W8
jennifermhazen@hotmail.com
(506) 433-4662

Sherri Cook-Carson
2629 Route 885
Havelock, N.B.
E4Z 5P4
carsonds@nb.sympatico.ca
(506) 534-2223

Chris Bell, Treasurer
12421 Route 114
Penobscuis, N.B.
E4G 2X8
buckybell@hotmail.com
(506) 433-5401

Dan Gallagher
5 Birmingham Street
Hartland, N.B.
E7P 3C6
mclealis@nbed.nb.ca
(506) 328-5248

Kim Quinn-Derrah, Newsletter Editor
1638 Route 890
Newtown, N.B.
E4G 1V4
kimberlyderrah@hotmail.com
(506) 433-6829

Notice to All Members

Annual Meeting, Banquet and Awards Presentation

November 13, 2010

Timberland Motel & Restaurant

Penobsquis, NB

The General Meeting will be held at 2:00 pm

With a short Director's Meeting to follow.

Social Time will be at 6:00 pm

With the Banquet to follow at 6:30 pm.

Our members have worked hard over the year

And we wish to recognize their efforts with an

Awards Presentation.

Don't forget to bring your Auction Items!!

Remember...Christmas is right around the corner...

Tickets - \$20 per person

For more information contact: Chris Bell

Telephone: 506-433-5401 (leave a message)

E-mail: buckybell1@hotmail.com

Please make cheque payable to NBApHC and forward to:

Chris Bell

12421 Route 114, Penobsquis, NB E4G 2X8

*Payment must be received not later than **November 6, 2007***

I would like to take this opportunity to thank all of our Sponsors for their generous support towards our Ronnie Wilkins Memorial Appaloosa Horse Show held on September 11th & 12th, 2010. Without them, there would be no show so a Great Big Thanks of Appreciation to you All. I have attached some names of our sponsors but by no means are these all of them:



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KIM QUINN-DERRAH
Barn Manager

kimberlyderrah@hotmail.com



NEWTOWN ENTERPRISES LTD.


FRANK R. DERRAH

654 MAIN ST., UNIT 12
SUSSEX, NB
E4E 7H9

PH: (506) 432-6060
CELL: (506) 434-1645
FAX: (506) 432-6096

Donald A. Dobbin, B.Comm., CFP, CA
Chartered Accountant
(Dobbin Professional Corporation)

694 Main Street
Sussex, NB E4E 7H9
Bus. (506) 432-6106
Fax. (506) 432-4781
Email: dadobbinca@nb.aibn.com



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Pleasant Valley Realty
www.pleasantvalley2000.com

Faith McMillan
432-0077
faith@nbnet.nb.ca



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