

North Star News



Hello Members!

It's the start of an exciting time of year and with spring finally here, that means show season is just around the corner! We've got a great year planned and hope you can join us for all the fun and great memories to be made!

2019 Show Calendar

June 22 & 23, 2019 - Grand Paint Classic POR

July 13 & 14, 2019 - Blast of Color Show

August 10 & 11, 2019 - Summer Splash & Futurity Show

Double F Arena-Hinckley, MN

Please visit the website for information regarding Judges, Show Bills, Stall and Camping Forms, Entry Forms, Lodging Information and Year-End Award details.

www.mnsphc.com

New in 2019:

We are very excited to add **Open Performance Halter** for Stallions, Mares and Geldings as well as **Open, Amateur and Open SPB Hunter Hack** to the show bill this year.

The MNSPHC Walk Trot HUS, MNSPHC Walk Trot Western Pleasure and MNSPHC In Hand Trail will continue to be offered and are open to any age and SPB. These classes are also qualifying classes for the All-Around Divisions! Check out the list of classes you can qualify for with each division at www.mnsphc.com/awards program page under Award Program Requirements.

Youth Club Fundraiser Class:

At the June show, the Youth Club will be hosting an egg and spoon class to support the youth club. More details to come.

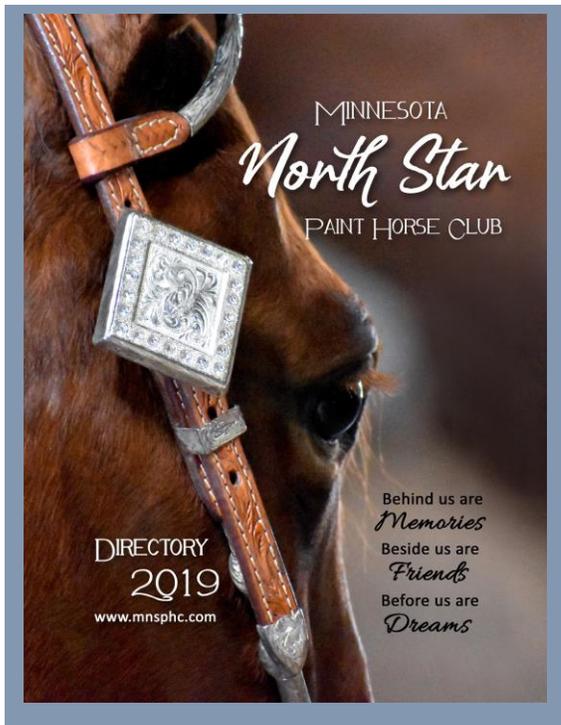
MN Horse Expo 2019/Volunteers needed:

April 26-28th, As many are aware, due to the snow, the Cattle Barn's roof collapsed this spring and they will not be allowing booths or vendors to be in the Cattle Barn during the Horse Expo. We have just received our new location for this year; we will be in the **Swine Barn, Booth L518**.

We are also looking for volunteers to staff the booth in approximately two-hour shifts. If you can help, please contact Teri Nielsen to schedule a time at t Nielsen13@yahoo.com or via our Facebook page.

Pattern Book Fundraiser:

Back by popular demand, we will be having the Pattern Book Fundraiser for MNSPHC. If you would like one, please contact Teri Nielsen at t Nielsen13@yahoo.com. The cost for the book is \$25 and you can choose to either have a hard copy of the book or you can have the patterns emailed to you. Hard copies can be picked up and purchased at the Horse Expo. They can also be picked up at the Zone 5 show in Cedar Rapids, IA, April 25-28th. Make sure to reserve yours today!



Directory:

The 2019 Directory is in and will be available at the MN Horse Expo. Those that are not picked up at the Expo will be mailed out at a later date.

Membership:

As a reminder if you haven't already renewed your membership, the deadline for using MNSPHC as your WSCA Member Club is May 20th to avoid the late fee. Club points for Year-End Awards will not start to accumulate unless Membership for both Exhibitor & Horse Owner are current. For your convenience, Membership Forms will be available at our booth during the MN Horse Expo too.

CONTACT US:

Do you have a question, comment or concern? We would love to hear from you! In addition to Facebook, there is now a contact us link on the front page of our website, as well as, a direct email address of mnsphc@yahoo.com.

We look forward to hearing from you!

Financials-Account Summary as of 12/31/18

MAIN CHECKING GENERAL FUND ACCOUNT

Beginning Balance January 1, 2018	\$34,719.08
YTD Income	\$96,664.25
YTD Paid Out	\$101,818.95
Ending Balance as of December 31, 2018	<u>\$29,564.38</u>

FUTURITY ACCOUNT

Beginning Balance January 1, 2018	\$3,230.41
YTD Income	\$7,270.00
YTD Paid Out	\$6,409.50
Ending Balance as of December 31, 2018	<u>\$4,090.91</u>

YOUTH SAVINGS ACCOUNT

Beginning Balance January 1, 2018	\$1,544.12
YTD Income	\$1,140.54
YTD Paid Out	\$605.60
Ending Balance as of December 31, 2018	<u>\$2,079.06</u>

All Accounts YTD Balance as of 12/31/18:

\$35,734.35

**General Fund Note: Some of the YTD Income & Expense include part of our Year-End Awards transactions after December 31, 2018

MNSPHC By-Laws:

For easy reference, Our By-Laws are printed in the back of our annual Directory as well as a tab linked to them on the front page of our website. We would like to encourage all members to become familiar with our club's by-laws.

Different policies and procedures are listed in detail such as election requirements or how to propose an amendment to our By-Laws.

APHA Convention:

National Directors-Merle Himle & Greg Simmet have both shared a Convention Update report with us. Their reports are included in the following pages. Included is a description of the APHA Rule change proposals and the results from the 2019 convention.

We have also attached a letter from Dr. Gary Magdesian DVM, Professor of University of California Davis, provided to APHA at the convention, regarding his research behind the W20 gene and the proposed rule changes.

Attention Youth Members, Are you Interested in Running for Office?

Before the general membership meeting, on May 4th, we will be holding elections for officer positions of the North Star Youth at the youth meeting at noon. If you are in the 14-18 age group and interested in a position, please plan to attend the meeting. Please reach out to Teri Nielsen at tnielsen13@yahoo.com or through Facebook if you have any questions! Look forward to seeing you there!

*****OFFICIAL MEETING NOTICE*****

Please join us for our General Membership Meeting

Saturday, May 4, 2019



200 2nd Ave. SE, Cambridge, MN 55008 – (763) 689-4812

We will have the lower level to ourselves!

Youth Meeting/Elections at Noon, General Membership Meeting at 1:00PM

Please come at Noon and enjoy something to eat, they have great food! All are welcome to attend!

General Meeting Agenda:

- Approve Meeting Minutes
- Place Financial Report on File
- Convention Report
- Futurity Update
- Shows
- Youth Club Fundraisers
- Club Awards and Hi-Point Halter Point System
- New Business
- Adjourn

*** In search of Show Scribes, Judge's card runners, gate crew, Youth Leader/Leaders. Please contact a board member if interested.

APHA Convention Reports:

Report Submitted from Merle Himle:

I started out the Convention on Friday, March 1 with the General Membership Meeting where Billy Smith spoke about the “state of the union”. He stated that APHA has 4 firsts he’s pretty proud of – the first association to offer online transfers, the first to offer a program like “Horse IQ”, the only equine association to have a 2 year operating budget in our savings, and the first to have employees of other equine associations asking our employees how we did a certain program or how we handle certain problems, idea, etc. Membership are down, but all the associations are. We have sold the building – to a Minnesota company! The move to the stockyards is progressing. He encouraged us to purchase a brick and continue to raise funds.

In the afternoon I attended the committee I serve on – Breed Integrity and Registration Advisory Committee – there was much discussion on 3 rule change proposals – both for and against.

- 1- Change Solid Paint Bred registry to Solid Registry and horses whose parents are both QH or both TB, who carry at least one paint pattern gene can get registration papers.
- 2- A change from 2 to 1 paint parent – the rule read: If a horse with two APHA Reg. parents does not exhibit a natural Paint marking, or if eligibility cannot be determined based on photographs, Regular Registry status will be granted if the horse possesses one Paint trait and APHA genetic testing proves that the horse carries at least one Paint pattern gene.
- 3- Breeder’s Certificates: rule change that the stallion owner does not need to sign the Breeder’s certificate- they will automatically be released by APHA. Stallion owner’s against this were concerned that if a mare owner owed them money, they could not hold the breeder’s certificate until they were paid.

It was voted to move all 3 forward to the Board of Director’s meetings on Saturday and Sunday.

Friday evening we toured the Fort Worth Stockyards to see where APHA’s headquarters will be housed and see the progress first hand – it is very historic!

Saturday morning we had Board of Director’s Meeting Session 1 where Roll Call is taken and the Committees report which rule proposals were voted forward. The luncheon was somewhat of a training session on “What is Horse IQ?” and how to use it. It is a pretty neat learning tool! In the evening we had the Hall of Fame and Awards Banquet – which is always inspiring!

Sunday is the Board of Director’s Meeting Session 2. The election for new EC member was held and David Lands from Virginia will fill the spot. We then voted (electronically) on all the rule change proposals that were brought forwards. All 3 from my committee were talked about and defeated. It was informative to learn that the W20 color gene is not a gene but a booster-so it cannot be considered the same as the Frame Overo or Splashed White.

It was a whirlwind 3 days but wouldn’t have it any other way. Any day you can talk “Paint Horse” is a good day –in my books! Thanks to be representing the North Star Paint Horse Club!

APHA Convention
March 1 – 3, 2019
Fort Worth, TX

Status of rule change proposals is as follows:

Control #ART-III-3 Eliminates confusion of how a director is replaced

Passed

Control #ART-IX-1 Institute one deadline for regional clubs to submit information

Passed

Control #ART-IX-3 Shorten the timeframe for APHA required club review period

Passed

Control #ART-IX-4 APHA's club requirement to respond to request for information or corrections within given time frame will be sent a 30 day reminder and if needed a second 30 day reminder will be sent. Failure to respond to second notice or in 60 days of March 1 will result in recommendation to revoke the charter.

Passed

Control #ART-X Eliminates confusion as to whether all clubs need to participate in a Zone Show (It is not mandatory)

Passed

Control #ART-XIV Eliminates confusion of where to find a list of regional clubs and racing affiliates.

Passed

Control #GR-010-Clarifies how an early rule implementation will be handled by the BOD.

Passed

Control #RG-020-2 Resubmission of last year's rule proposal change regarding SPB.

Defeated

Control #RG-070-1 Further attempt for regular papers for SPB

Defeated

Control #RG-100 Requesting early implementation of a rule allowing foals to be registered off the stallion breeding report rather than a Breeder's Certificate.

Defeated

Control SC-050 Ranch horse classes should be in a separate category

Passed earlier

Control #SC-090 No restriction on shows held during the APHA Convention

Control #SC-090-1 Early implementation requested of allowing shows that are not within 250 miles of another show with the exception of 1 or 2 judged shows or special events.

Control #SC-192 Allowing cords to be used in place of a chain for In Hand Yearling Trail.

Passed

Control #SC-206 Early Implementation Requested for changing the maximum points for Green HUS, WP, Trail, Western Riding.

Passed

Control #SC-301-2 Adding Ranch Horse Cutting to the approved Ranch Horse Classes already in place and the scoring process.

Passed

Control #SC-301-3 Early implementation requested Clarifies the Ranch Horse Class rules.

Passed

Control #SC301-5 Further clarification of Ranch Horse Rules with early Implementation requested.

Control #AM-085 Amateurs and Amateur Masters are allowed to show stallions but no stallions are allowed in the Novice Amateur classes.

Control #AM-176 Adding Amateur Overo and Tobiano Color classes.

Passed

Control #YP-109 Adding Youth Walk Trot (ages 11 – 18) and the general rules.

Passed

Control #YP-109-1 Early implementation of Youth Walk Trot (ages 11 – 18)

- In the Amateur Committee meeting that I am a member of, it was decided to table the idea of an Amateur Coaching program to help youth develop skills and become involved with horses and possibly join the APHA ranks. At this time it would be too difficult to monitor and enforce. We will continue to work on this under the new name of APHA Mentor Program.
- A Minnesota company bought the current APHA building with our tentative move to the Stockyards taking place late fall, 2019.
- Registrations, transfers and memberships are down. Advertising is down. The General Store is now called the Barn Door and is not run by APHA.
- The Tax Event Fund for Fort Worth is what helps the bottom line of the APHA World Shows.
- The two National Shows will be funded by APHA.
- Better awards for the World Show were requested but the funds are not there. If the horse economy goes further downhill, our reserve funds will keep us fluid for two years.

Submitted by Greg Simmet, APHA Director

From: Dr. Gary Magdesian DVM,
Professor University of California Davis

March 2, 2019

RE: RG020-2

Dear Executive Committee and Breed Integrity/Registration Advisory Committee of the APHA:

I am a lifetime APHA member, and have been a member of APHA since 1984. I have owned APHA registered horses since that time, and have been a small time breeder over many years. Currently, I am the owner of 5 APHA registered horses. I am writing with concern over rule change proposal #RG-020-2 and hope that this important vote can be postponed until next year, until more research and information is available to make as informed a vote as possible, as outlined below. I am a professor and veterinarian at the UC Davis School of Veterinary Medicine. I am a researcher and clinician, which has afforded me the opportunity to learn both from the research setting, as well as the clinical setting through working with horses, breeders and horse owners directly. I have a strong background, interest, and research experience in the area of equine genetics. I was part of the team that discovered and published the allele causing MH (malignant hyperthermia) in stock horses, as well as participated in the study and publication that discovered the splashed white 1, 2 and 3 alleles, collaborated on a publication about hereditary epilepsy in horses, and have studied coat color-associated deafness in Paint horses. I am currently involved in ongoing equine genetics studies.

As a dedicated and loyal APHA member and horse owner, as well as researcher, I have several concerns about the long-term impact on the American Paint Horse breed integrity if rule change proposed #RG-020-2 is passed. Because I care deeply for this breed, I wanted to express these concerns to you in hopes that you will consider the information that I have to offer, and consider postponing a vote on such an impactful rule change proposal until more information and data about the genes in question in American Quarter Horses become available.

1. Regarding registration of AQHA horses with paint pattern alleles into a "solid" registry with APHA: This would allow offspring of such horses to be registered as "overo" in the next and subsequent generations, should they have a paint allele and a paint trait such as a freckle in a sock or star, lower chin white or other paint trait, despite not having qualifying white. The concern here is that solid horses with a white pattern allele (also referred to as "paint" allele) are solid for a reason. By this I mean that there are other modifier genes, which interact with the pattern alleles, and act as white-suppressing genes, that are as of yet unidentified and thus untestable. These suppressor genes are inherited, just as white amplifying genes are. By increasing the number of solid horses with paint alleles over time, we will be selecting for solid horses with paint alleles that also have white suppressing genes. Many of you are aware of stallions or mares that have paint genes and are solid phenotypically. Their offspring also tend to be solid to a greater extent, because they are inheriting the suppressor genes to minimize or prevent expression of those white pattern alleles that they may have inherited. It would not be conducive to color production in the APHA to propagate such suppressor genes over time. *This has been demonstrated and documented in research of Haflinger and Lipizzaner breeds, where selection has favored horses with minimal to no white expression. Within those breeds, Sabino-1 (SB-1) and splashed white (SW) genes are present in some horses, but they do not express as white spotting phenotypes as they do in Paints, pointing to gene interactions that have been brought about through selection of solid colored horses (solid phenotype) in these breeds. This has led to solid phenotypes in those horses, despite having those white color genes (SB1 and splashed white). (reference: Druml et al, 2018) because of other genes interacting with them and suppressing the phenotypic expression. We should not want the same to occur in our Paint horses through selection of breeding solid AQHA horses with color genes that have solid

phenotypes, brought about by interactions with other white-suppressing genes, for which there are currently no tests. The Haflinger is a nice example of a breed that has a high percentage of horses with the W20 allele (more on this below), as well as lesser frequencies of sabino-1 and splashed alleles. Through selection, this is a solid breed despite having color genes. In other words, SB-1 and SW are not expressed as they are in Paints through inclusion of solid horses into the breeding programs.

2. W20 is particularly concerning to be used as a means of registering Quarter Horses (without qualifying white) into a solid APHA registry. We have much yet to learn about W20, which is a mutation in the *KIT* gene. With the current available published data, W20 appears to be a modifier, which serves to amplify or increase the amount of white in some horses with certain specific color genes, especially other *KIT* mutations (i.e. in the case of compound heterozygotes), including W22 in a family of Thoroughbreds, W5 in another family of Thoroughbreds, and Sabino-1 in stock horses. Otherwise, the gene appears to have little effect on phenotype by itself other than contributing to normal leg and face markings in some horses with the gene, which are observed in many breeds. It is present in many breeds that are not color breeds, including Thoroughbreds, Arabians, Haflingers, Lipizzaners, Paso Finos, and many others. In fact, many horses with W20 have no visible white present, even in the homozygous state. Furthermore, the W20 allele has a wide breed distribution, even in those breeds that have not selected for white spotting such as the Haflinger, which has a high reported allele frequency of 0.42 (i.e. 42%) for W20 (Bellone et al., 2017- tableS2 as reference). There is no compelling scientific published evidence to suggest that W20 is a primary paint pattern or independent color producing allele.

a) From the reference: Hauswirth et al, 2013 (pg. 765), regarding W20:

“With sequence and phenotype data of more than 200 horses, we now realised that this variant actually appears to have a subtle effect on pigmentation and consequently termed it W20. This variant is common and segregates in many horse breeds.”

b) From the Durig et al paper (2017): This paper describes the white amplifying effects of W20 on another *KIT* mutation, W22, seen in a family of Thoroughbreds.

“We previously described the W20 allele (*KIT*:p.Arg682His) which probably leads to only a minor reduction in *KIT* function (Hauswirth et al. 2013). W20 is a very common allele segregating in many diverse horse breeds.””Thus, our data confirm the earlier reported ‘white increasing’ effect of the W20 allele while at the same time suggesting that other unknown genetic variants with similar effects may explain the pronounced white spotting phenotypes of some horses with the W22/+ genotype.”

In the paper by Durig et al, the authors also point out that W20 has a ‘subtle effect’ on pigmentation.

c) This paper by Hoban et al, 2018 describes the known *W KIT* variants known by 2017, and leaves out W20 from the list of dominant white phenotype-producing variants, as it goes from W19 to W21, notably skipping W20:

“To date 22 different alleles (W1-W19, W21-W24) underlying dominant white phenotypes have been identified.1-9 Although large phenotypic variations have been observed for each of these 23 alleles, they can all lead to extended white patterning under heterozygous conditions”.

Note that W20 is not included in these statements. I would be happy to share any of these references with you, please contact me via email*

3. In my opinion, there needs to be more research conducted on W20, its effects when present without any other known white pattern alleles, and importantly, the prevalence among Quarter Horses and other breeds without APHA qualifying white. I am currently collaborating with the UC Davis Veterinary Genetics Lab on a study investigating W20 in over 50 horse breeds. I am confident that this study will add to the growing body of

knowledge of the impact of W20 both in breeds that select for white spotting, as well as in those breeds which do not select for white spotting phenotypes and yet have a high allele frequency for W20, such as the Haflinger and other solid breeds.

4. The relatively high % of solid paint bred horses with W20 leads to questions about the ability of W20 to be causal for white spotting on its own, especially when there are homozygous (W20/W20) horses that are completely solid (i.e. -no phenotypic evidence of a paint pattern).

5. What is particularly concerning is that there are many solid horses, including AQHA registered horses, reported to be homozygous for W20 (I have examples listed below). There are no other known white spotting paint genes which have been shown to produce a solid horse in the homozygous state. Tobiano, splashed white, sabino-1, or frame overo do not produce solid horses in the homozygous state. Though frame overo is lethal in the homozygous state, the foals are completely or nearly all white. W20 is the only allele on the genetic panels which produces solid horses in the homozygous state. This is additional evidence that W20 is not a white spotting variant of its own right.

6. Long term implications: If one considers the long term effects of including solid Quarter horses in the solid APHA registry, there will be a trend to select for solid horses over time. Those horses, if bred to others like them, will produce other solid horses the majority of time (except for rare "crop outs"). Many of these offspring will have W20, and if they happen to have a freckle in a sock or star, lower lip white or other Paint trait, they will be registered as overo despite not having qualifying white. This is concerning, because these horses would be no more likely to produce color than the average AQHA horse, and have had no selection for color. Again, research to document this would be important and helpful to have when deciding about such rule proposal modifications.

7. Finally, before APHA considers such a rule proposal, more information and research would be helpful in allowing as informed of a vote as possible. Namely:

-What is the true effect of W20 when there are no other known white pattern mutations present? Again, the fact that a high % of SPB horses have this mutation demonstrates it is not a frequent color producer on its own.

-What is the prevalence of this mutation in solid colored, non-double registered AQHA horses? When those horses have been bred, with resulting W20/n or W20/W20 offspring, what % are crop outs or have qualifying white?

8. Examples:

Legal N Twisted is an AQHA registered stallion and is W20/W20 (homozygous). I encourage you to look up pictures of him and his foals on Facebook and online; his only visible white is a small star on his forehead. Per his owners, he has approximately 25 beautiful Quarter Horse foals on the ground, each of which is either W20/n or W20/W20 (all of his foals inherit W20 from him because he is homozygous). Yet he has no APHA registered foals (i.e., no crop outs). Some of his foals have no white markings at all, even on the face or legs, and you can see these pictures on his Facebook page. Other stallions that I am aware of that have tested W20/W20 (homozygous) include Dunn N Style, (APHA), The Southern Playboy (AQHA), and Dunitsmart Thistime (AQHA). These stallions are solid horses, with no paint white spotting. Again, I encourage you to evaluate their phenotypes online and on Facebook, as well as to look up the registered offspring for those with foals on the ground. If W20 was a paint pattern producing gene by itself, one would expect homozygous (W20/W20) AQHA horses to exhibit paint pattern color, and both homozygous and heterozygous AQHA horses to produce a high % of paint color in their offspring including producing crop outs, yet this is not the case.

In summary, including AQHA registered horses in a solid registry for APHA would produce offspring, when mated to other such solid registry horses (Paint to Paint rule), or to AQHA-only registered horses should rule proposal RG-070-1 pass this year, which would be eligible for regular registry if they exhibit a paint trait such as a freckle in a sock or white on the lower lip and an allele such as W20. Over time, from a genetics stand point, this would be expected to select for solid horses in the APHA registry. With a high % of solid AQHA horses that have W20, this would now select for a solid phenotype among APHA horses and could negate the many years of selection for increased white pattern performed by many dedicated APHA breeders. Please keep in mind that there are many paint pattern alleles that are yet to be discovered, likely many more than we currently know about. I am often asked about crop outs and regular registry horses that test positive only for W20 on genetic panel tests, and whether that means W20 is causing the white spotting. Many of these horses have other color genes that we cannot yet test for, some of which may be interacting with W20. It is therefore important to address these impactful questions about the role of W20 in pigmentation across breeds for a more informed vote in the future. Additional research being conducted at UC Davis about W20 and other genes in solid horses will help to answer some of these questions. In addition, a task force consisting of geneticists, clinicians, and APHA members and breeders would be helpful in defining the potential long term impacts of such rule proposals.

As a long time and loyal APHA member who loves the breed, I thank you for reading this letter, and appreciate your consideration. Please contact me with any questions (kgmagdesian@ucdavis.edu).

Sincerely,
Gary Magdesian, DVM, DACVIM, DACVECC, DACVCP
Professor, School of Veterinary Medicine
University of California, Davis

References:

- Table S4 from online "supplementary material"; from: Bellone RR, Lui J, Petersen JL, et al. A missense mutation in damage-specific DNA binding protein 2 is a genetic risk factor for limbal squamous cell carcinoma in horses. *International Journal of Cancer*. 2017;141:342-353.
- Druml T, Grilz-Seger G, Neuditschko M, et al. Novel insights into Sabino1 and splashed white coat color patterns in horses. *Animal Genetics* 2018;49:249-253.
- Hauswirth R, Jude R, Haase B, et al. Novel variants in the KIT and PAX3 genes in horses with white-spotted coat colour phenotypes. *Animal Genetics* 2013;44:763-765.
- Durig N, Jude R, Holl H, et al. Whole genome sequencing reveals a novel deletion variant in the KIT gene in horses with white spotted coat colour phenotypes. *Animal Genetics* 2017;48:483-485.
- Hoban R, Castle K, Hamilton N, et al. Novel KIT variants for dominant white in the Australian horse population. 2018;49:98-100.