Winter 2018/2019 ~ Newsletter

The ICAA is the only **stand alone registry** dedicated to building and preserving the purebred Appaloosa defined by eight generations of Appaloosa x Appaloosa only. To that end, ICAA welcomes most Appaloosas with Appaloosa parents and characteristics, with a preference for contrasting coat color patterns.

ICAA boasts a healthy and diverse gene pool with categories for Appaloosas with non-Appaloosa grandparents, great grandparents, etc. to contribute to the eight generation purebred Appaloosa. Intermediate categories allow breeders and buyers to identify Appaloosas that best suit these goals within their own programs.

ICAA offers opportunities for their registered Appaloosas and Youths to earn points in local breed and open shows, trail and distance programs, as well as national and international competitions, and offers awards for production achievement,.

Take pride in the ICAA. There is no other registry out there like it. Please visit us at www.icaainc.com and show your support by liking our Facebook Page - International Colored Appaloosa Association!

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Special - Appaloosa Genetics *And the Contributions and Benefits of our Solid lp/lp Horses* - Page 4

THE ANNUAL 2019 ICAA STALLION SERVICE AUCTION HAS BEGUN

The 2019 ICAA Stallion Service Auction started December 15th and will run until January 15th. The stallions for the auction have been posted on the 2019 ICAA Stallion Auction Facebook page (https://www.facebook.com/icaastallionserviceauction/), and put on the website (www.icaainc.com). Please go to one of these sites to see the rules and information on bidding.

We have a really great lineup of 13 stallions this year, including an F6 (6-generation)! Please look them over and consider one of them for your mare for the 2019 breeding season. Don't miss this opportunity!

We want to thank all of the stallion owners who made such generous donations of their stallions. Stallion owners will receive a free registration in 2019.

Winning bidders will receive a free membership, as well as a fantastic deal on a good stallion.

The proceeds from this auction will go to help support our activities such as the Trail Logging Programs, Open Show Point Program, and the Distance Program (Endurance and Competitive). Fund raisers like the Stallion Service Auction help us maintain our very reasonable enrollment fees.

Ima Rockin Secret F2-2711

Stallions in the Auction are listed below in no certain order: ↓⟶

BCA CHATS YAMAHAWK F6-2699
TMR COMANCHE MOON F5-2655
CTR SUPER SONIC F4-2716
LAZY MOON MALHUER MS
BCA TOFOZ CHATANGA F5-2646
TOTALLY DISTINCTIVE ApHC
BRANDON'S SUN BEAR F3-2263
IMA ROCKIN SECRET F2-2711
FVF STRAIT MAGIC F4-2703
CTR TURN AND BURN F4-PENDING
HHR IMA RAZZLING BEAR F2-2538
RAJUNS ROYAL PRINCE F4-2619
RSECRETJOE MEDALLION F3-2443
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NEW RULE CHANGES TO GO INTO EFFECT

1. **The name of the Breeding Stock Registry will be changed to the Non-Characteristic Division.** These horses will be registered per their generational classification with an N before their registration number. Geldings will be eligible for registration in this division along with mares and stallions. Stallions will be required to be F3 or above per current rules. Geldings will have the same requirements as mares per current rules.

2. **All horses registered in the Non-Characteristic Division will be eligible to enroll in the Open Show Point Program** (these horses are already eligible for enrollment in Trail Logging and ICAA Distance Programs).

3. **All horses registered in the Non-Characteristic Division who are enrolled in the OSPP will be allowed to compete in Open and Appaloosa Breed shows, earn points, and be eligible to qualify for year-end awards.** They will not be eligible to compete in any ICAA shows or events unless ICAA is offering a separate class for solid horses.

4. Currently, registration papers of non-characteristic mares and stallions are stamped "Breeding Stock Only - Not Eligible for Race, Show, or Exhibition". This will change to "Non-Characteristic - Not Eligible for Race, Show, or Exhibition in ICAA Shows or Events unless Solid Classes are Offered".

5. OSPP awards will be divided into the various classifications of Foundation Registry, Regular Registry, and Non-Characteristic Division.

6. Testing for pattern is not required, but phenotypically solid, non-characteristic foals can be registered in the Regular or Foundation general registries if they test positive for LP and be eligible to compete in ICAA shows and events. If they are not tested, they will be registered in the Non-Characteristic Division. If untested foals are later tested and found to carry LP, or later develop a coat pattern, they can advance to the Regular/Foundation registries.

UPDATED POINT CHART FOR THE OSPP

In addition to the new rule changes above, an updated Point Chart for the Open Show Point Program (OSPP) will also go into effect. ICAA knows the efforts of getting a horse ready for a show, only to get there and there are no other entries in the class. This will hopefully give some incentive for owners to go.

HIGH POINT CHART

Placing:	1	2	3	4	5	6
Entries:						
18+	12	10	8	6	4	2
15-17	6	5	4	3	2	1
12-14	5	4	3	2	1	
8-11	4	3	2	1		
5-7	3	2	1			
2-4	2	1				
1	1					

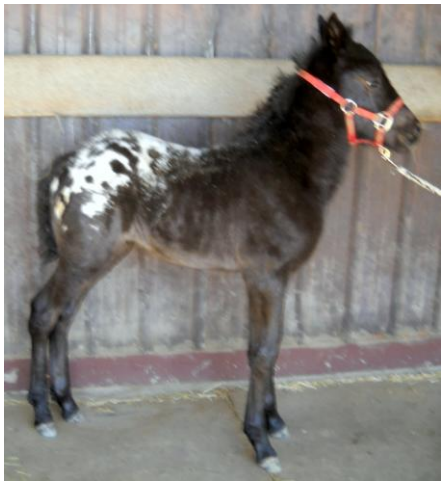
VERSATILITY POINT CHART

Placing:	1st	2nd	3rd
Halter	3	2	1
Pleasure (Western or English)	3	2	1
Gymkhana (Times obstacle classes)	5	4	3
Performance (Classes requiring a specific performance such as trail or reining)	7	6	5

New Registrations

SPR Special Secret F3-2738, **5-Panel N/N**
Smoky Black Varnish Roan Filly
Owned by Conny Riedel

BCA Chat Starwalk F5-2741, **5-Panel N/N**
Black Near-Leopard Colt (**For Sale**)
Owned by Charles Potts, Blue Creek Appaloosas



BCA Zamos Cherakna F6-2739, **5-Panel N/N**
Black Blanketed Filly
Owned by Charles Potts, Blue Creek Appaloosas

BCA Zamos Iron Bog F6-2740, **5-Panel N/N**
Black Near-Leopard Colt
Owned by Charles Potts, Blue Creek Appalosas

BCA Chatfu Waatnuwas F6-2742, **5-Panel N/N**
Black Snowcap Filly
Owned by Charles Potts, Blue Creek Appaloosas

Welcome New Members

Scarlett Pennywell of LA
Adam J Stambaugh of MI

For those who wish to receive a hard-copy of the Newsletter, please notify us and they will be sent through snail mail. We understand some people do not have access online or just like to hold the hard-copies in their hands!

~Special~

Appaloosa Genetics

And the Contributions and Benefits of our Solid lp/lp Horses

By Sharon January

Can you cross an Appaloosa mare that looks like this:

SPR Special Secret F3-2738

Smoky Black Varnish Roan Filly

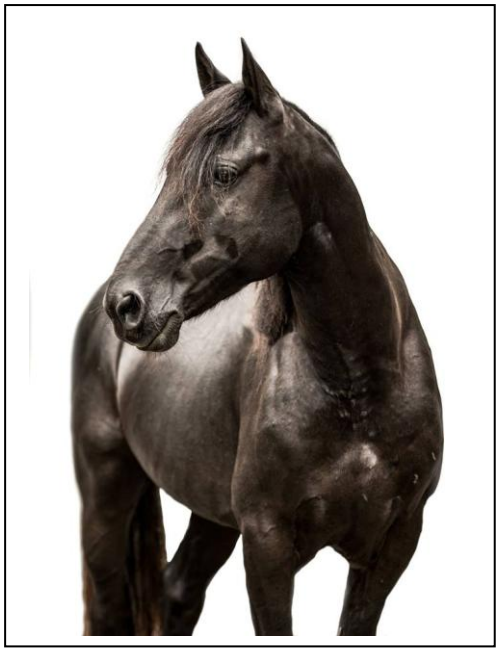
←

To a stallion that looks like this:

CTR Turn and Burn F3-Pending

Solid Black Stallion

→



And get a foal with a coat pattern like one of these?

FVF Wind Serenade F3-2658

BCA Chats Tsumago F5-2701

The answer is yes. In fact, ALL resulting foals from this particular cross theoretically should have a coat pattern like the leopard foal or the near-leopard foal above 100% of the time. You might ask, "How is this possible?"

While most people seem to know that you always get a coat pattern of some kind from a fewspot or snowcap, many do not understand the genetics behind this. In this article, I'll try to connect the dots for those who do not understand Appaloosa genetics.

To start with, let's go over a few Appaloosa basics. LP is the "Appaloosa gene", or the "leopard complex" gene. This gene is what creates the characteristics (white sclera, striped hooves, and mottled skin), the varnish roaning, and the spots. It is expressed in test results as LP.

There are other genes that create the coat pattern of the Appaloosa, called pattern genes. Currently, there is only one pattern gene that has been discovered and can be tested for, although they feel there are many, which explains the vast array of coat patterns we see. The only one they can currently test for is PATN1. This is the pattern gene that creates leopards and near-leopards (the white coat patterns covering 65% to 100% of the horse's body). The pattern genes require the LP gene to "light them up"; to be expressed. A horse that is not carrying LP can still carry and pass on PATN1 (and the other pattern genes) but they will be solid, with no coat pattern, as the pattern genes will not be expressed without the LP.

Every horse always carries two base color genes. They CAN carry one or two LP genes, one or two of a particular pattern gene, one or two agouti genes (this gene restricts black, if the horse is carrying a black gene, to the points and so creates a bay), one or two of a particular dilution gene such as dun or cream, etc. If a horse carries two of the exact same gene they are said to be homozygous for that gene. If they are carrying only one gene of a particular color or pattern, they are said to be heterozygous for that color or pattern. Some genes are dominant and some are recessive. There are only two base color genes in horses; red and black. Black is dominant and red is recessive, so if a horse carries both a red gene and a black gene, the horse will be black. ALL other horse colors are a creation of other genes at work on those two colors. So as not to confuse, as color is not the topic being written about except for a brief education on how genetics work, the intention was to only use black and red here. However, since we will be using real horses in this article, with real genetics, there has to be a dilution gene added to the mix since the mare carries one cream gene.

The hard and fast rule is that the sire and dam will each throw one of their two color genes to their foal, which then gives the foal its two color genes; one from each parent. This will determine the foal's base color. If a horse is heterozygous (carrying one red gene and one black gene), it has a 50% chance of throwing the black gene and a 50% chance of throwing the red gene to its foal. Each new breeding is a new roll of the dice with the same 50/50 chance. If a horse is

homozygous for black, carrying two black genes, then it will always throw black 100% of the time. If it is homozygous for red, carrying two red genes, then it will always throw red 100% of the time. In genetic terms, black is stated as E and red is stated as e. Capital letters mean a gene is dominant and lowercase letters indicate that it is recessive. A homozygous black horse would be stated as EE, a homozygous red horse would be stated as ee, and a heterozygous black horse would be stated as Ee.

And so, the Appaloosa genetics work the same. If a horse is homozygous LP, stated LP/LP, they will throw an LP gene to their offspring 100% of the time. For reasons we do not understand, when a horse is homozygous for LP, it somehow suppresses the spots, so LP/LP horses do not have any spots (hence your most well known snowcaps and fewspots, and less known varnish roans and other coat patterns that do not have any spots). LP/LP horses also have CSNB (Congenital Stationary Night Blindness; not to be confused with moonblindness). The reason these horses are known as color producers is because they will throw that LP gene 100% of the time, just as a homozygous black horse will always throw a black gene. A heterozygous LP horse is stated as LP/lp (or sometimes LP/n, depending on the testing facility; n means negative for a particular gene, and lp means negative for the LP gene). These LP/lp horses always have spots and are the most colorful and sought after of Appaloosas because of those spots. Like explained with a heterozygous black horse, an LP/lp horse will throw that LP gene 50% of time. The other 50% they will not, as there is no other LP gene to throw (like the dilution and agouti genes, they may only be carrying one of this particular gene and they'll either throw it or they won't; it's a 50/50 chance). If a foal does not get the LP gene from either parent (which is always a possibility when breeding two heterozygous horses together or a solid and a heterozygous horse together) then the foal will be solid and said to be lp/lp (not carrying any LP gene).

The pattern genes create the white coat pattern behind the spots. As stated earlier, the PATN1 gene creates leopards and near-leopards, but there are many other pattern genes as well. So a heterozygous LP horse (LP/lp) that is also carrying PATN1 is going to be a colorful leopard or near-leopard with spots. Other pattern genes with LP/lp will create a vast array of coat patterns, such as a blanket with spots.

A horse that does not get any pattern gene, but does get the LP gene, will be your varnish roans without any white coat pattern. If the horse is LP/lp, you will likely not see any spots when they are born, as they will generally be born phenotypically (i.e.; the appearance) solid, but as they roan with age, the roaning will go around the existing but previously invisible spots and the lighter the horse gets with age from roaning, the more the spots will show up and the more colorful the horse will become. If these horses not carrying any pattern genes are LP/LP, they will not have spots to roan around, and so will only be varnish roans.

So, back to the original question of the cross between the first two horses pictured. These two horses are real ICAA horses with the actual genetics stated below. Below you will see what is known as a Punnett Square. They were (before computerized reports were available), and still are at times, used to determine all possible outcomes of crosses between certain animals and plants if you know their genetics. They can be very large depending on how many genetic variables and possibilities there are. The first one shown below is very basic for this particular cross as their genetics are simple and only their base color, one dilution gene, and two pattern genes (LP and PATN1) are listed.

Stallion: CTR Turn and Burn is a solid black Appaloosa stallion with the genetics EE, lp/lp, PATN1/PATN1. Knowing what you learned above, he is homozygous for black so he will always throw a black gene, he does not carry any LP gene to throw to his offspring, but he is homozygous for the PATN1 gene so he will always throw the pattern gene that creates leopards and near-leopards to his offspring.

Mare: SPR Special Secret is a smoky black varnish roan Appaloosa mare with the genetics Ee, Cr/n, LP/LP, and is n/n (negative) for PATN1. Knowing what you learned above, she is heterozygous for her base color; she is phenotypically smoky black but she is carrying a red gene, so she can throw either a red or a black gene to her offspring. She is also carrying one cream gene (Cr), a dilution gene that creates palomino, buckskin, and smoky black, depending on the base color and if agouti is present. So she has a 50% chance of throwing that cream gene and a 50% of not throwing it. She is homozygous for LP so she will always throw an LP gene. She is not carrying any pattern genes, which we know because she not only tested negative for PATN1, but she is not showing any white coat pattern at all. She is currently young and is only starting to roan, but she will eventually be a varnish roan with no spots.

The Punnett Square below: The sire, CTR Turn and Burn, is on top, with all possible combinations of what he can throw (in his case it is always the same, PATN1, lp, and E, 100% of the time, so there are only two square), and the dam, SPR Special Secret, is on the left, with all of her possible combinations that she can throw (she can throw LP and E; LP and e; LP, E and Cr; or LP, e, and Cr). All possible combinations of this cross and the results of their offspring are in each square.

	PATN1 lp E	PATN1 lp E
LP E	LP/lp n/PATN1 EE	LP/lp n/PATN1 EE
LP e	LP/lp n/PATN1 Ee	LP/lp n/PATN1 Ee
LP E Cr	LP/lp n/PATN1 EE Cr	LP/lp n/PATN1 EE Cr
LP e Cr	LP/lp n/PATN1 Ee Cr	LP/lp n/PATN1 Ee Cr

So as you have learned about basic color and Appaloosa genetics from the article, any resulting foals from this particular cross should be 100% leopards or near-leopards, with 50% being black and 50% being smoky black. All resulting foals would have the genetic makeup of EE, LP/lp, n/PATN1; or Ee, LP/lp, n/PATN1; or EE, Cr/n, LP/lp, n/PATN1; or Ee, Cr/n, LP/lp, n/PATN1. All would be sought after for their colorful coat patterns and there would be no risk of getting a solid foal nor an LP/LP foal without any spots that would have CSNB.

Below is another Punnett Square that shows the more common cross of a stallion and mare that are both heterozygous for PATN1 and for LP. I'm using homozygous black for both the mare and the stallion; if I used heterozygous black, this Punnett Square would be even larger, as I would have had to add squares for all of those possible color combinations along with the pattern genes. Homozygous red would have the same results for red. So the stallion and the mare in this hypothetical cross would both read as EE, LP/lp, n/PATN1. All of the possible combinations of the genes that each could throw to their offspring is listed, with the stallion on the top and the mare on the left. Remember, in this cross, both the mare and the stallion will always throw E. Each will throw LP 50% of the time and each will throw PATN1 50% of the time. In this hypothetical cross, we do not know if either horse is carrying another pattern gene in addition to PATN1.

	PATN1 lp E	PATN1 LP E	lp E	LP E
PATN1 lp E	PATN1/PATN1 lp/lp EE	PATN1/PATN1 LP/lp EE	n/PATN1 lp/lp EE	n/PATN1 LP/lp EE
PATN1 LP E	PATN1/PATN1 LP/lp EE	PATN1/PATN1 LP/LP EE	n/PATN1 LP/lp EE	n/PATN1 LP/LP EE
lp E	n/PATN1 lp/lp EE	n/PATN1 LP/lp EE	lp/lp EE	LP/lp EE
LP E	n/PATN1 LP/lp EE	n/PATN1 LP/LP EE	LP/lp EE	LP/LP EE

The squares have been colored in only for ease of counting the results. So as you have learned about basic Appaloosa genetics from the article, resulting foals from this particular cross would be as follows (but remember, each breeding is a new roll of the dice and the below odds would always be the same with each foal):

25.00% chance foal would be solid black (blue squares)
37.50% chance the foal would be black leopard or near-leopard, with spots (light green squares)
12.50% chance the foal would be black with other or no coat pattern, with spots (could be varnish roan, have a blanket, or other white pattern; purple squares)
18.75% chance the foal would be black fewspot or near-fewspot, with no spots (orange squares)
6.25% chance the foal would be black with other or no coat pattern, with no spots (could be varnish roan, a snowcap, or other coat pattern; gray square)

As you can see, there are many different genetic combinations that you could get from this cross, and this does not count all of the pattern genes that cannot currently be tested for, but phenotypically you would have the results below:

The theory of 25% lp/lp (solid) holds true
The theory of 25% LP/LP (no spots and carrying CSNB) holds true (18.75% + 6.25%)
The theory of 50% LP/lp (with spots) holds true (37.50% + 12.50%)

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REMINDER: ALL horses are required to have 5-Panel N/N test results **AND all mares and stallions have DNA Typing on file with AGI!** If a horse has already been DNA Typed with the ApHC, those results MUST be on file with AGI, or the horse must be typed again through AGI. You may purchase your DNA Typing from the ApHC ($10) and then send those results to AGI ($10) to enter into their database. When doing this, please call AGI and tell them to allow ICAA access to these results. There is a discount for current ICAA Members to do DNA Typing ($35) through AGI for horses that have not been typed at all or for those who wish to do the test again through AGI rather than deal with the hassle of getting them from the ApHC and sending to AGI.

There are also discounted packages with AGI for current ICAA Members for 5-Panel with DNA Typing included, 5-Panel with DNA Typing and SCID included, and Color and Pattern Packages. Use the form available on the ICAA website Forms Page for these discounts. You do not need your membership number to send in the test samples so proceed to submitting these to AGI (instructions are on the form). You will need to be a current member to receive the results but do not need for your membership to be completed prior to sending samples to AGI. At ICAA we believe that when you pay for testing, these are YOUR tests and if you are a current member we send you the results as soon as we receive them from AGI. You pay AGI directly with the form and sample.

ICAA makes zero dollars off of these tests.
Our partnership and discounted packages with AGI are 100% a member benefit.

ICAA PROGRAMS

Enroll your horse today in the Open Show Point Program, the ICAA Distance Program, and/or the Trail Logging Program. Year end awards are offered in OSPP and the Distance Program. See the ICAA website at www.icaainc.com for more information and forms!

Also, don't forget the Production Achievement Award System! Awards are given to mares who produce five colored ICAA registered foals and stallions who produce 15 colored ICAA registered foals!
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As an ICAA member you'll get reduced registration fees, reduced transfer fees, reduced testing fees, and other **fees at reduced rates**. You can file your ICAA **Stallion Reports for free** if filed by Dec 31st of the breeding year. You can enroll your Appaloosa or Youth in the **Open Show Point Program, The ICAA Distance Program,** and/or enroll in the **Trial Logging Program,** and you can receive **Production Achievement Awards** for your mares producing 5 (five) colored ICAA registered foals or for your stallions producing 15 (fifteen) colored ICAA registered foals. You can **advertise** your ICAA registered stallions **for free** in the **Stallion Showcase**, as well as **advertise** your ICAA registered horses for sale in the **Sale File**, also **for free**.

INTERNATIONAL COLORED APPALOOSA ASSOCIATION

Annual Membership Form

Clip and mail with fees to:
ICAA, 4610 New Mexico 206, Milnesand, NM 88125
or pay online and email this form

Membership runs from January 1st to December 31st

☐ I am a NEW Adult Member ($15)
☐ I want to RENEW my Adult membership ($15)
☐ I am a NEW Youth Member ($15)
☐ I want to RENEW my Youth Membership ($15)

Payment for year(s) _____

ICAA Membership (if renewing) # _____
Birth Date (if Youth) _____

PLEASE PRINT

Name: _____

Mailing Address: _____

City/State/Zip: _____

Phone Number: _____

Email Address: _____

Web Site URL: _____

Revised 2018

You do not need to own an Appaloosa to be a member and support ICAA.
Memberships can now be paid for and submitted online!
***Registrations and other work can also be paid for and submitted online if paperwork is quality scanned and emailed*!**
As always, thank you for supporting the best breed and remaining true to the Appaloosa!

All letters to the editor, materials submitted for publication, and advertisements should be sent to icaa@icaainc.com.

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