

Beauty AND Biomechanics Can Work Together

Beauty is as beauty does, but good conformation and biomechanics are crucial in a sport horse. Whether you're a breeder, a trainer or an amateur looking for your next equine partner, it's important to find a horse physically suited to the job. Evaluation of a horse's conformation and movement can be an important tool in predicting a variety of things, including future sport suitability and a predisposition for soundness problems.

THE USDF (U.S. Dressage Foundation) has developed a Dressage Sport Horse Breeding (DSHB) division which includes DSHB competitions, a Breeders' Championships series and educational sport horse seminars.

Their sport horse seminar program is an excellent opportunity to learn about the evaluation and judging of sport horses as well as the ins and outs of the DSHB competitions. These seminars are open to all and are especially recommended for breeders, judges (especially those aspiring to become USEF Dressage Sport Horse Breeding judges), and anyone who would like to simply learn more about evaluating the conformation and movement of horses.

The Delaware Valley Combined Training Association recently hosted one of these seminars July 26 and 27 in Pennsylvania with seminar instructors Bill Solyntjes and Kristi Wysocki, both licensed "S" dressage judges and "R" sport horse judges. The seminar squeezed an incredible amount of information into a two-day format, with classroom lectures both days at New Bolton followed by practice judging and live presentations at Iron Spring Farm in Coatesville.



A comprehensive report on the recent two-day USDF Sport Horse Seminar focused on Dressage Sport Horse Breeding classes.

Overall Impressions Matter!

The evaluation of a sport horse typically begins with an evaluation of conformation, which was also the starting point of both the weekend's lectures and the USDF student manual provided to the participants. However, the first step is to look at the big picture conformation-wise. This is not the time to nitpick or jump ahead to the evaluation of details; it's the time to begin to form an overall first impression. Does the horse look uphill or downhill? Is he built proportionally and does he look balanced?

There are different body types for different jobs. For example, a champion Western cutting horse will likely have conformation which is not conducive for upper-level dressage. A dressage horse should look like a dressage horse, with an uphill build and a center of balance that is higher and farther back than you would find in most stock horse breeds or race horses.

To find the center of balance, you can draw an imaginary line from the point of the shoulder to the point of the buttocks and then draw an imaginary vertical line from the top of the withers to the ground—the intersection of these two lines will be the horse's center of balance. Theoretically, the higher and farther back the center of balance, the more uphill the horse will be. The lower and farther forward the center of balance, the more downhill the horse will be, which tends to make him heavier on the forehand and harder to collect.

Ideally a horse should also have a slightly rectangular frame, meaning the length of the body is approximately ten percent longer than the height of the horse. This rectangular frame should be caused by a nice sloping shoulder paired with a strong hind end—a horse should not be rectangular due to a long back! A long back will tend to be weaker, whereas a shorter back tends to be stronger but can cause a loss of lateral flexibility, so neither extreme is good. The length of the back (measured from the point of the withers to the point of the croup)

should be less than fifty percent of the entire length of the body. The topline should be well muscled and smooth. The neck should flow smoothly into the withers, for example, and the loin should flow smoothly into the croup.

Imaginary Lines and Plumb Lines

Imaginary lines and plumb lines can be incredibly helpful, whether you're using them to determine how the shoulder angle compares to the pastern angle (the angles should match) or whether you're drawing a mental plumb line to determine if a horse's front legs are straight or not.

It usually takes a lot of practice to train your eye to see these lines as you evaluate a horse. By the second day of the seminar, even some very experienced participants were still holding up their pens at arm's length to help them visualize straight lines. A tip also offered by the instructors was to find things in the background—such as fence lines or buildings—which can be used to help visualize horizontal and vertical lines. One of the horses presented at the seminar wonderfully illustrated how helpful it could be to find a horizontal line in the background to help evaluate uphill/downhill balance. The horse was older and its back had dropped a bit which gave it the appearance of being croup high and downhill. However, by using the horizontal line of the wall of the arena in the background, we could establish that the horse was actually not croup high at all. This is a good thing to figure out before risking marking down a horse for being something he's not!

Head, Neck, Shoulders

Moving along in the conformation evaluation, the next step is to evaluate the head, neck and shoulders. Beginning in December the score sheets for USDF Dressage Sport Horse Prospects and Breeding Stock classes will break the conformation score down into four equally weighted categories: overall frame and topline, head/neck/shoulder, back/loin/croup and legs/feet. Together these four scores will account for thirty percent of the final score in a Sport Horse Prospects class and 40 percent of the final score in a Breeding Stock class.

The head should be proportional, with a well-defined throatlatch, a good-sized mouth and a large, kind eye. Too thick a throatlatch can make it harder to put the horse on the bit and can cause breathing problems, while too small of a mouth can make it hard to find room for both bits of the double bridle later on. As you examine the head, this is also the time to note faults such as a parrot mouth, which is considered to be hereditary and would be penalized especially in a Breeding Stock class.

Next is the neck—a beautiful, well developed neck is considered by many to be one of the hallmarks of a dressage horse. The neck should be naturally arched and

should come up out of the withers at a 90 degree angle to the shoulder. The length of the topside of the neck should be twice as long as the length of the underside of the neck. While an overly long neck may look elegant, they can also tend to be stiff and can negatively affect the horse's balance; therefore of the two "flaws" a short neck is preferable to a long neck.

The neck is a lever and can help or hinder a horse. A horse with a ewe neck may be harder to get supple in the neck; a horse with a swan neck may be harder to get to use his back properly; and a horse with a low set neck may be harder to get to collect and move uphill. A good visual offered by instructor Kristi Wysocki was to look at the neck and see if it makes you think more of a sail or an anchor. A "sail" neck is desirable—up and floating—whereas an "anchor" neck is heavy and downhill.

The horse's shoulder should be long and sloping and should match the angle of the front pasterns. The angle between the shoulder (scapula) and the arm (humerus) should be at least 90 degrees. The length of the arm should be equal or greater than half the length of the scapula. If the shoulder angle is too upright it can lead to more knee action and less reach from the front leg. If the arm is too short it can increase the concussion on the front legs and can make lateral work more difficult for the horse. The withers should be long and smooth—overly prominent withers or flat, poorly defined withers can both lead to difficulties with saddle fit, among other things.

Back, Loin, Croup

The back should be of moderate length, and will have already been first observed as you were noting the horse's proportions and rectangular frame earlier. Additionally



Giglia Steinman

Using the author's own Friesian Sporthorse, Lauderdale ROF, she demonstrates finding the horse's center of balance.



the back should be smooth and neither roached (excessive upward arch) nor swayed (excessive downward arch.)

The loin should be well muscled and relatively short and should blend smoothly into the croup, which should be neither too flat nor too steep—at least 15 degrees, and preferably 18–22 degrees of slope. The peak of the croup will indicate the location of the lumbo-sacral joint, and ideally the peak of the croup should be directly above the point of the hip (when viewed from the side) to enable the horse to make the best use of his hindquarters. The femur (which goes from the pelvis to the stifle) should be forward sloping. A femur which is too upright can contribute to hind legs which are too straight when viewed from the side (also referred to as “post legs”.)

Legs and Feet

Next we're on to the evaluation of the legs and feet. There are so many potential leg faults and limb deviations they could probably fill a book, ranging from minor faults (like slightly toed in front legs) to more severe faults (like extreme bench knees, or legs which are back at the knee.) The most important thing to remember is that any deviation of the limbs will likely increase the stress on the ligaments, tendons, and joints. Sometimes one flaw (such as being base narrow) may be combined with another flaw (such as toeing out) which is then considered a “cumulative fault”—even more severe and more likely to cause a problem later.

When viewed from the front, the joints of the front leg should be lined up straight. (This is where you'll get to use your imaginary line again, this time to visualize a plumb line dropping straight down.) The same is true for the hind legs, when viewed from the back. When viewed from the side the front leg should be neither back at the knee nor over at the knee, and the cannon bones should be short and with good bone. When viewing the hind leg from the side you should be able to imagine a plumb line going from the point of the buttock down to the back of the hock and then the back of the fetlock, with a vertical cannon bone.

Pasterns should be neither too short and upright (predisposed to arthritis, ringbone and navicular, and less comfortable to ride) nor too long and sloping (predisposed to suspensory ligament injury.) When overly sloping pasterns are paired with overly straight rear legs (“post legs”) it is considered a severe cumulative fault.

The feet/hooves should be big and round, with the angle of the toe matching the angle of the heel and the angle of the pastern.

The Gaits

In USDF Dressage Sport Horse Prospects classes, only the walk and trot are evaluated in-hand, while all three gaits are evaluated in the Materiale and Sport Horse Prospects



Under Saddle classes. Evaluation of the gaits in-hand is not much different than evaluation of the gaits under saddle in a dressage test. The gaits must be pure and rhythmic, with freedom and reach from the shoulder, and engagement and articulation of the joints in the hind end. As you watch a horse move you should be able to see how the conformational strengths and weaknesses work to influence the gaits. There are exceptions: sometimes a horse with average conformation may be a great mover, and sometimes a horse with great conformation may be an average mover, but generally there will be an obvious correlation between the conformation and the quality of movement.

Temperament and Trainability

Temperament was referred to in the seminar as the “fourth gait” to indicate its importance. A horse with a heart of gold and a fantastically willing attitude may be able to overcome all sorts of weaknesses, while even the most perfectly conformed and moving horse can be a struggle

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to train if the temperament or work ethic is poor. The whole time you are evaluating the conformation and gaits of the horse you should be also noting his behavior and how he reacts to both the surroundings and the handler.

Judging Youngsters

Judging “current year foals” can be trickier than judging older horses. They can look awkward as they go through growth spurts, making it challenging to evaluate their conformation. You must judge what you see on that day, but some things which would be more heavily penalized on an adult horse will not be penalized as severely for a younger horse. For example, a “butt high” youngster may look like his hind legs don’t have enough angle in the joints or he may look slightly ewe necked. The front legs may toe-out slightly, which is usually not worrisome because the legs will likely straighten out as the chest widens. (At this point we were cautioned not to have the blacksmith over-correct a slightly toed-out foal, as it could lead to toeing-in later as the chest widens.)

Babies may also not want to show off the full potential of their gaits. They may be nervous, tight in the topline, or not entirely comfortable (or trained) to lead. Walks may become “running”, and they’re as likely to canter as they are to trot. As you evaluate them you have to watch carefully for the moments when you can catch glimpses of their true potential. Scoring should be based on the best steps of each gait, not an average score of all walk and trot steps shown. If a baby shows a few steps of an “8 trot” he should score an 8, even if he was cantering or playing just a moment earlier!

Judging Hands-On

Both days of classroom lecture were followed by hands-on practice judging and lecture at Iron Spring Farm’s world-class facility. This portion of the seminar was priceless. It is one thing to imagine a nice neck based on a lecture, it’s something else entirely to see a nice neck in real life! It’s also one thing to imagine a plumb line when it’s drawn on a photograph, but something else entirely to try to visualize it on a yearling who may not be keen on standing still for too long in the first place.

A nice variety of horses were presented—from international caliber Friesians and approved Warmblood breeding stallions, to a sweet (and very pregnant) recipient mare of unknown breeding and a 21-year-old teaser stallion. This variety allowed participants to see a range of strengths and weaknesses.

The seminar instructors had already cautioned against having breed or color biases, and they were able to illus-

trate this very well when the second horse presented was a Friesian colt—and he was even nicer than the first horse presented (a very nice Warmblood gelding by Florianus II.) Quality is quality, and the standards for judging conformation and gaits remain the same regardless of the breed, so the DSHB ring is a level playing field where any breed of horse can score well.

A highlight of the presentation at Iron Spring Farm was when the Grand Prix Westfalen stallion Florianus II (Florestan I / Damenstolz) was brought back to the arena after the presentation of the Grand Prix Friesian stallion Hedser 465 (Adel 357 / Ouke 313) and the two were presented together to demonstrate the similarities between them in spite of being vastly different breeds. Good conformation is good conformation, and both demonstrated this as well as especially nice necks and shoulders. Their necks were definitely “flags,” and the two stallions screamed “dressage” even standing still.

The practice judging continued on the second day, as participants were split up first into large groups and then into smaller groups or pairs. It’s a fun challenge to be put on the spot—to assign a score and then be able to support it—and it also drives home the point that judging in-hand is harder than it seems. There is a lot to see and evaluate in a fairly short time, with horses who may not want to stand still or square or trot in a straight line. It also illustrated that there is some “gray area” in judging, as one person’s 7.3 may be another person’s 7.8, but both are able to justify their scores.

The seminar concluded with a demonstration of a “Get of Sire” class where three of the KWPN stallion UB40’s offspring were presented together. Classes like this must be very gratifying for stallion owners, and there are similar USDF Dressage Sport Horse Group classes offered for mares (“Produce of Dam”) and for farms/breeders (“Breeder’s Group” classes) and more. These less common group classes are fun and interesting as groups of related horses can be presented and judged, even though ages may vary.

Ultimately, whether someone is thinking about entering their horse in a DSHB show or just trying to choose the best prospect as a future riding horse, it all boils down to conformation, movement, the “fourth gait” temperament and sport suitability. Studying conformation can help a person predict potential training difficulties or soundness problems. Seminars such as USDF’s Sport Horse Seminar are great educational opportunities for breeders, judges, and owners alike, because at the end of the day we all have the same goal—to continue to improve the quality of sport horses in North America! 