



# THE RIGHT

*As far as hocks go, the correct angle is a matter of fact and opinion.*

**By Christine Hamilton**

# Angle



**W**HAT YOU LIKE OR WANT IN A HOCK DEPENDS ON WHAT YOU intend to do with a horse. There are physical absolutes that govern how bone angles fit together and what that does to a horse's hind leg function. But subtle differences in those angles can predispose a horse to do some jobs better than others, and there's where opinion comes in.

The *Journal* asked four respected horsemen at the tops of their professions to give us their opinions of six hocks: Don Topliff, Ph.D., AQHA judge and associate dean of the college of agriculture, science and engineering at West Texas A&M University; Al Dunning, AQHA Pro Horseman and AQHA judges' committee vice chair; Dave Dellin, AQHA judge and Pro Horseman; and Wayne Halvorson, AQHA judge and Pro Horseman. Topliff is a regular lecturer on conformation at educational sessions for AQHA judges; all three Pro Horsemen have trained world champions.

Here's what they had to say.

### **Hock A**

**Topliff:** I have no problem with this hock, though it has a tendency to be straight. It is a shorter-hipped horse, which I think tends to make it look straighter. This hock certainly is not as desirable as Hock F. Again, I don't think this one is excessively straight, and while I would note it, I would not discriminate heavily against it.

**Dunning:** The angle to this horse's hock is pretty good. It's fairly close to Hock F, but this horse has a better hip and a lot better croup. This horse shows more strength, especially in the stifle.

What I don't like is this horse doesn't have a lot of meat in the hock, the thickness of the muscle and tendons. It's not big and strong-looking. He's light-boned. Because of that, he might be predisposed to tendon problems behind.

**Dellin:** This horse's hock looks above average to me. He's got a slight amount of set to his hock, which I like. I like to see that slight angle, where I can drop down a plumb line from the point of his hock to the ground and it doesn't touch his leg.

That doesn't mean I want him sickle hocked or standing way underneath himself, because that puts too much weight and pressure on the hock joint.

The other thing I like about this horse is the way the stifle and gaskin are set underneath his hip. He's got good shape to his hip, and he is strong in his loin where it ties into his hip.

**Halvorson:** This hock is in the ideal range of hock angle. It is in balance with the rest of the joints around it.

Last summer, we evaluated a large number of horse hocks. Many of these horses were quality movers and great performers, but others were not. When measuring the degree of angle of hock from the side, 135 degrees to 150 degrees was ideal; 160 degrees or more and 130 degrees or less were major faults with all others minor faults.

Keep in mind that so many other parts of the conformation of a horse, including the back, loin, hip, stifle and pastern, play an important role in the balance, quality, movement and ability to perform maneuvers.



### Hock B

**Topliff:** This is too straight in the hock, or posty-hocked. It also appears to have a bog spavin, which is often seen in horses with hocks that are too straight.

The line from the pin bone does go straight down the cannon bone. But the angle between that line and the line formed from the point of the hock to the patella (or stifle) is too small.

The problem can also be seen in the angle of the pasterns, which are very straight up and down. In mature horses, the angle of the pasterns is indicative of the angle between the femur and the tibia/fibula. The entire column of bone from the ground up is too straight. It limits both stride length and the ability to absorb shock from the concussion of the foot striking the ground.

**Dunning:** This is a real big-hipped horse with a heavy stifle

and a steep croup. He has a nice, short cannon bone. But this horse is post-legged behind: he's straight up and down, with no bend to the hock. He'll be a real rough horse to ride, and he won't hold up to stopping and turning quick.

It's a major fault in conformation in my book. I don't like horses like that, because I've never had one that could stop and turn around and really do something.

**Dellin:** This horse is too straight in his hocks for me. He has a tiny amount of set to where if you dropped down from the point of his hock, it's not going to touch his ankle, but when you look at his stifle and gaskin right down through his hock, it almost looks like a straight line. It will put an extreme amount of weight and pressure on the whole bony column underneath that hip. And he's very straight and upright in his pastern.

The nice thing about this horse is that he has a really pretty hip and he looks very strong through his back. But because he's got all that strength up high, it's going to put an exorbitant amount of pressure all the way through that leg. You'll see bogs to his hock, like that little bubble on the side.

**Halvorson:** This hock is in the minor fault range. It has a slight angle, and it sets low to the ground, which I like, but this horse's problems are his steep croup and steep pasterns.

### Hock C

**Topliff:** This hock is OK but not as good as Hock F. The line dropped down the back side of the cannon shows the hocks set ever so slightly behind the leg. If the hind foot was placed so the line just touched the point of the hock, the line would



not touch the fetlock.

It has just a little too much set to the hock. It is a very slight amount and something I personally would not discriminate against heavily.

**Dunning:** I like this horse behind. He has a little bit of a high rump and doesn't have an extremely long croup. But he has a good set to his hock and some roundness to his hip, and he'll probably move way up under himself.

His hock isn't square up under him, and he might be slightly "camped under," or stands a little bit more in the stopping position. If you call this horse sickle-hocked, you're wrong in my book; but he's just a bit more camped under than he should be to be perfect.

But this is my kind of horse. His hock is fairly low to the ground, he's got a decent pastern, and he looks strong in the stifle and the gaskin. He could be an athletic horse that can stop and turn and move around.

**Dellin:** This horse's hocks are set low to the ground, and he has a really nice amount of set to the hock. The angle of his pastern looks very correct; there's a lot of muscle coming down deep and low in the stifle and the gaskin.

**Halvorson:** This is in the minor fault range. There is more set to his hock than is ideal, and he has a steep croup. This horse's hocks are nice and low to the ground.

### Hock D

**Topliff:** This horse is also too straight in the hock, or posty-hocked. In my opinion it's better than Hock B, mainly because of the angle of the pastern. At least this hock has

some slope to the pastern, where Hock B is very upright.

**Dunning:** This horse has a decent loin but a very short croup. From the top of his tail to the point where his gaskin ties in is real straight. From the flank to the back of the horse's butt, is very narrow.

He's also post-legged behind. He's predisposed to hock problems of all kinds – curbs, chips – because mechanically, he's not going to move correctly because of that straight up-and-down angle to the hock.

**Dellin:** This horse is extremely straight through his stifle, gaskin and hock. There's no way for him to be able to get up underneath himself as good as a horse with more bend to the hock. From a pleasure horse trainer point of view, he's going to hit the ground harder than a horse with more give to that hock joint. He'll be springier behind, stiffer and shorter strided at the jog.

**Halvorson:** This horse is too straight in his hock, and it is a major fault. This horse will have a rough, stiff ride and could have soundness problems in the future.

### Hock E

**Topliff:** This is a great example of a sickle hock. When the line is dropped from the pin bone, it touches the hock, but the fetlock is well in front of the line. The hind foot ends up well under the horse which is not a good thing. The concussive force ends up concentrated in the hock joint and can lead to soundness issues.

**Dunning:** This is a sickle-hocked horse. The shape of it is



almost like a backward “C.” He’s predisposed to hock problems because of it.

The horse has a decent hip and a good-sized stifle. You see horses built like this that you can use. But for a horse that really has to use its hock, like a rope horse, I wouldn’t think a hock like this would hold up very well.

**Dellin:** I put this horse on the bottom of my list. I personally would rather see a posty-hocked horse than a sickle-hocked horse like this one.

It puts so much stress on those tendons and ligaments off the back of the hock. The rear suspensory ligament ties in at the lower hock joint, and when you have a lot of set to a hock, it adds a lot of pressure on that attachment point.

**Halvorson:** This hock angle is a major fault. The horse is sickle-hocked with too much set. It looks weak and couldn’t hold up to a lot of work.

### Hock F

**Topliff:** This hock is very good in my opinion. When you drop a plumb line down from the pin bone, which is the back portion of the pelvis, the line touches the point of the hock and goes straight down the back side of the cannon bone to the fetlock and into the ground at a 90-degree angle.

The tibia/fibula that runs from the point of the hock to the patella, or stifle joint, is at a good angle to the line we drew down the back side of the leg. This is an appropriate “set to the hocks.”

**Dunning:** This horse is pretty good behind. He doesn’t have an extremely long croup. He doesn’t have a big, what I call “carry down,” from the dock of the tail down to the point where the muscle hits the top of the gaskin, like you want to see in a big stopping horse. But he’s got freedom in his leg to swing.

The angle to this horse’s hock is good. Look at the plumb line straight down – the cannon bone is straight up and down and then the leg angles up to the stifle; that’s what I like to see on a good moving horse.

**Dellin:** This horse has a nice set to his hock, but it’s just a little higher off the ground than what I like. All-in-all, it’s an above-average or an average hock. He’s a little shallow in the stifle to me, and it ties in higher because his



hock and cannons are a little longer.

**Halvorson:** It represents the ideal range. The hock joint itself could be bigger and lower to the ground. 📍

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**How would you rank these hocks? To find out how our pros ranked them, look in the halter calendar and news on page 230.**