

ALTERNATIVE FIBER SOURCES FOR HORSES

Need to stretch your hay supply? Consider adding hay cubes, complete feeds, or forage byproducts.

As winter approaches, some horse owners might be watching their hay supply closely. The good news is that there are alternative fiber sources owners can use to supplement their horses' diets if hay is in low supply.

No matter the breed or intended use, all horses require fiber in their diets. According to the National Research Council's Nutrient Requirements of Horses (2007, 6th Edition), a large body of evidence suggests that insufficient dietary fiber can lead to several digestive issues (such as colic) and behavioral vices (such as cribbing) in horses. Horses' fiber needs are met most commonly by pasture and hay, but in the absence of these sources, horse owners must find alternative fiber options. Some common alternatives include hay cubes, complete feeds, and fiber byproducts.

Hay cubes are an excellent fiber source for horses, and are generally easily accessible at most feed stores. The two main benefits to using hay cubes versus hay are:

Hay cubes typically contain less dust than hay, meaning horses are less subject to inhaling particles that could contribute to respiratory disease; and

- Offering hay cubes generally results in less wasted feed compared to hav.
- If offered voluntarily, most horses will consume more hay cubes than hay, so owners should measure and monitor their horses' intake. Hay cubes can be fed just like hay, at a 1:1 ratio of the like hay type the horse currently consumes. For example, if a horse consumes five pounds of timothy hay at each feeding, replace that with five pounds of timothy hay cubes and adjust if needed to maintain the animal's proper weight. Hay cubes are heavier in weight, so you'll need to weigh them to ensure the horse is getting the proper amount of forage.

Complete feeds are formulated to provide a large proportion of a horse's nutrient needs, including fiber, and are readily available through most equine feed manufacturers. Complete feeds usually contains more than 16% crude fiber and are designed to be fed in larger amounts compared to a lower fiber grain mix with little to no hay alongside. Thus, provide several small meals throughout the day. Feeding directions are included on all complete feed packages; following label directions is important to ensure horses consume adequate amounts of nutrients, fiber, and other feed components.

Byproduct fiber sources include beet pulp, bran, and grain hulls. Beet pulp, produced by sugar beet processing, is a popular fiber source for horses because of its digestibility and palatability. Studies have shown that a horse's diet can contain up to 55% beet pulp without negative effects. It's important to remember, however, that beet pulp's digestibility is higher than most grass hays, so ensure the horse's diet is balanced properly when making the switch.

Brans, such as rice bran and wheat bran, are another option but are often less desirable due to their high phosphorus concentrations. If feeding bran, ensure the horse is consuming adequate calcium to keep the calcium:phosphorus ration to at least 1:1. Additionally, remember that rice bran contains high fat levels, so it should not be used in overweight or obese horses

Oat hulls are also high-fiber, but are often dusty and should be blended with water prior to feeding.

Because these fiber byproducts are only fermentable fiber sources, they should be fed alongside hay or another complete fiber source. Thus, these sources should be used to stretch hay rather than replace it.

Take-Home Message

Horse owners should familiarize themselves with alternative fiber sources to either stretch or replace pasture and/or hay. Hay cubes, complete feeds, and byproducts are all viable fiber sources and can be beneficial when fed correctly. If questions arise on feeding alternative forage sources to individual horses, contact your veterinarian or equine nutritionist.

Kristen M. Janicki, MS, PAS

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Listen to this week's Augusta Co-op Horse Course on forage extenders https://www.youtube.com/watch?v=7BtOUan77yw

For questions contact Augusta Co-op's Equine Specialist Hillary Morris at (540) 314-0928.



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EVENTS / CALENDAR

ROAD TO THE RING WORKSHOP

Thursday, November 7 6 PM - 8:30 PM

Augusta Expo (Fishersville, VA) - Coffee Pavilion

Join Augusta Co-op for an educational workshop! Students ages 9-18, currently enrolled in 4-H or FFA are welcome to attend. Hear from industry leaders, professional showmen, learn the latest trade secrets! All attendees receive one FREE bag of Augusta Show Feed (one per exhibitor). RSVP to Daniel May at DMay@AugustaCoop.com or (540) 294-6140

RED HOT HOLIDAY PRE-BLACK FRIDAY SALE EVENT

Friday, November 15 8 AM - 6 PM Saturday, November 16 8 AM - 5 PM

Augusta True Value Staunton 1205B Richmond Road

Huge deals in-store on clothing, boots, power tools and much more!

AGRONOMY CUSTOMER APPRECIATION DAY AU

Friday, February 7 11 AM – 2 PM

Verona Greener Valley Supply 963 Laurel Hill Rd, Verona, VA 24482

Additional information: RSVP to Staci Alger at (540) 885-1265 x 243 or SAlger@AugustaCoop.com

AUGUSTA CO-OP / ZOETIS BEEF PRODUCER MEETINGS

Monday, November 11 6:30 PM

High's Restaurant

73 W Main St., Monterey, VA 24465

Tuesday, November 12 7:30 AM

Middlebrook Community Center

54 Cherry Grove Rd, Middlebrook, VA 24459

Hear from Zoetis' Dr. Alley on 'Preparing calves for the next stage of production.' RSVP required by October 31 to Allison Bagley at ABagley@AugustaCoop.com or (540) 885-1265.

END OF YEAR FARM SUPPLY SALE

December 1 – 31

All Augusta Co-op store locations Additional information or list of sale items: www.AugustaCoop.com or (540) 885-1265

AUGUSTA CO-OP VENDOR DAY

Wednesday, February 19 3 PM - 8 PM

Weyers Cave Community Center 682 Wevers Cave Rd.

Book your 2020 items at drastically reduced rates at our annual vendor day! Door prizes, food, educational seminars and much more!www.AugustaCoop.com or (540) 885-1265

AMMONIA: OUT OF MY BARN!

Have you ever entered a barn only to be assaulted by the noxious fumes of ammonia? Your eyes water, your nose waters, your throat closes; you might be tempted to sneeze just thinking about it. Imagine then what it must be like for horses confined in an enclosed space with poor ventilation. Where can they go to breathe sweet, fresh air? The good news is ammonia buildup in a barn is preventable to a large degree with sound management practices. As we head into colder weather and potentially some additional barn time for horses, consider the following:

- Clean stalls once or twice daily to remove all urine-soaked bedding, and strip stalls at least weekly.
- Remove horses from stalls while cleaning to minimize exposure to ammonia gases that are stirred up with raking and pitching of bedding.
- Provide good drainage in stalls and aisle ways to facilitate exit of urine, and regularly clean under mats when possible.
- Use highly absorbent bedding materials.
- Mix an ammonia-neutralizing product with clean bedding.
- Provide excellent barn ventilation and avoid closing up a barn when possible.
- Use slotted inlets at eaves that are open year-round to allow refreshment of air.
- At every opportunity, house horses outside or turn them out regularly to offer a clean air environment.

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COMBATING 'SKIN CRUD' ON HORSES

Does your horse have annoying guck on his lower leg or body? Here's your quick guide to managing and preventing skin crud on your horse.

Living outdoors and sweaty workouts predispose horses to a variety of skin conditions. Good horsekeeping goes a long way in preventing skin funk, but sometimes even the most diligent barn cleaning and grooming routines just aren't enough. Here's a look at how to identify, treat, and prevent skin crud on horses.

"Skin Crud" Defined

"Skin crud" is a catch-all term used to describe any hair condition in the horse that causes raised bumps, har loss, scaling, crusts, and/or pus, said Susan L. White DVM, MS, Dipl. ACVIM. These conditions have a visual "ick" factor and can be itchy or painful for horses.

"Similar to the descriptive term 'colic,' which describes gastrointestinal pain in the horse and can be present from a number of different diagnoses, 'skin crud' can occur due to a variety of different causes," she said.

Common Skin Crud Causes

In some cases, skin crud comes from within the horse; it can be caused by allergies or sensitivity to sun (also called photosensitivity), for example. Other causes, such as rain rot (characterized by small crusty bump), are caused by bacteria Still other cases are caused by a fungus—ringworm (scaly, crusty patches of skin where the hair falls)—for instance. Environmental conditions can also result in skin crud; pastern dermatitis, commonly called scratches, usually is environmental in origin.

Treating Skin Issues

Unfortunately, there's no one-size-fits-all solution. An accurate diagnosis from your veterinarian determines the best treatment plan, White said. Generally speaking, however, there are some protocols that many veterinarians recommend to treat some common conditions:

Rain rot: Shampoo the affected area and rinse with warm water to help soften and remove the crusts. This might take several baths. White said.

"Antiseptic shampoos may be used," she said. "Personally, I do not like shampoos with iodine because it tends to dry the skin."

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Pastern dermatitis: Clean and thoroughly dry the affected area with a gentle nondetergent or antimicrobial shampoo. While scratches are healing, try to keep your horse in an area where his legs can remain clean and dry—this means avoiding turning out in muddy conditions if at all possible.

"Topical antimicrobial medication (and) zinc oxide sunscreen for white haired areas sensitive to solar radiation are two other common treatments," White said. "These medications should always be applied to a clean and dry area; otherwise (they are) trapping organisms and irritants next to the skin."

Ringworm: Topical antifungal medication can be applied after carefully cleaning the area and removing any crusts of exfoliated skin. Some veterinarians don't recommend bathing the whole horse because it could contribute to spore dispersal and hair breakage, White said. Topical medications are best applied gently and locally, she said, as the organism lives in hair follicles; brushing too aggressively could spread the fungus to other parts of the horse's body.

Tips for Preventing Skin Issues

Of course, prevention is the best treatment option. White offered these tips:

Feed a well-balanced diet, which in itself can help a horse maintain healthy skin. Additionally, multiple products are advertised to support skin health, but White encouraged owners to check with their veterinarian or equine nutritionist before adding supplements to their horses' diets.

Groom horses thoroughly and regularly. Proper grooming moves skin oils from sebaceous glands to the skin surface and the hair shafts. The natural oils help protect the skin from environmental pressures.

"Grooming also has the added benefit of giving you a chance to examine all of the skin and discover any problems early in the disease process," White said.

Additionally, hosing horses off with cool water after a workout or a bath can help. Daily shampooing is not necessary as too many applications can contribute to dry skin, White added. When you do bathe with shampoo, use a nondetergent product designed for horses.

Clean saddle blankets, fly sheets and masks, tack, and other equipment. For example, dirty saddle pads rubbing on a sweaty back damages the skin's natural protective layer, creating an environment where bacteria and/or fungus can thrive.

Also, White added, "ringworm is commonly spread between horses through shared use of tack and blankets without washing or cleaning between horses. Boots and other lower leg protective gear, especially if dirty or if dirt or sand is trapped beneath them may damage skin."

Take-Home Message

Skin conditions can be unsightly, frustrating to treat, and cause your horse discomfort. But with a little elbow grease and attention to detail, you can quickly identify and treat problems before they become significant issues.

Katie Navarra















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CORE VACCINATION: PROTECTING HORSES FROM 5 DEADLY DISEASES

The core vaccines target five serious diseases that have high mortality rates. Without vaccination, they're nearly impossible to prevent—and every horse on every kind of farm is at risk. The American Veterinary Medical Association (AVMA) collaborated with the **American Association of Equine Practitioners (AAEP)** to identify diseases that are endemic to a region, have potential public health significance, require reporting to government health authorities, are virulent/highly infectious, and/or pose a risk of severe disease, according to the AVMA. "These are very dangerous diseases, but there are effective and affordable vaccinations for all of these threats," says Dr. Paul Lunn. Dr. Angela Bordin shares basic descriptions of these "dangerous five" diseases.

1. Rabies

Horses usually pick up the virus that causes rabies via bites from infected (rabid) wild animals, such as raccoons, skunks, bats, or foxes. The incubation period varies from a few weeks to several months. The virus likely multiplies at the site of bite and, when it reaches peripheral nerves, rapidly reaching the horse's brain. Once there it spreads to other organs and tissues and, through cranial nerves, reaches salivary glands and possibly nasal secretions. Once the virus becomes established, its effects are devastating—and irreversible. Clinical signs described in horses are highly variable, but common signs can range from lameness, poor athletic performance, and lethargy to depression, aggressiveness, convulsion, and recumbency (lying down or falling and being unable to rise). With the onset of clinical signs, there's no effective treatment, and horses should be euthanized. If you see a wild animal exhibiting unusual behavior, contact your local animal control agency immediately to remove the animal. Due to the potential risk of virus transmission from horses and other infected animals to humans, animals suspected of having rabies should be handled by individuals who have been appropriately vaccinated against rabies.

2. West Nile virus (WNV)

West Nile virus is an infectious agent transmitted via



mosquito bites. It infects birds, humans, and horses and other mammals such as dogs. The virus enters the bloodstream and travels to the central nervous system, where it causes brain and spinal cord inflammation and leads to clinical signs within three to 15 days. These include ataxia (incoordination), muscle trembling, depression, lethargy, weakness, and sometimes fever. Disease severity varies, and not all horses develop clinical signs. Among those that do, one-third die from the disease. Among the survivors. 40% have lasting neurologic effects, mainly weakness and ataxia. Thanks to an aggressive vaccination program, the number of WNV cases has dropped in the U.S. An additional way to reduce risk of all mosquito-borne diseases is to control mosquito populations on the farm, by eliminating or reducing mosquito breeding habitats, and in conjunction with your local mosquito control authority.

3. Eastern equine encephalomyelitis (EEE)

Eastern equine encephalomyelitis is a viral disease that's also transmitted through mosquito bites. The incubation period can vary from a few days to a few weeks. Clinical signs include high fever; colic; anorexia; and neurologic signs as depression; blindness; ataxia; head-pressing or tilt; recumbency; seizures; sleepiness; circling; and paralysis of the pharynx, larynx, and tongue. Zero to 15% of affected equids survive EEE infection, and those that do usually have lifelong neurologic impairments, such as loss of full control over bodily movements. In the United States EEE occurs mainly in the East, especially in the South, but it has occurred as far west as Texas and as far north as Wisconsin in the Midwest. Birds harbor the virus silently—showing no signs—and act as reservoirs. Mosquitoes that feed on infected birds and mammals transmit the virus from birds to horses and humans.

4. Western equine encephalomyelitis (WEE)

Like EEE, WEE develops after exposure to the virus transmitted via bites from infected mosquitoes. It causes clinical signs similar to those of EEE. Fortunately, its effects are not guite as devastating: 50% of affected horses can survive a WEE infection. It is important to note, however, that at least half of all WEE cases end in death and neurologic deficits are common among survivors. The WEE geographical region extends west of the Mississippi River. The good news is there have not been recent reports of WEE in horses. The bad news, though, is this doesn't mean the virus isn't present. Scientists have detected the virus in birds (which, as with EEE, don't develop clinical signs but act as inapparent carriers), so the threat of infection in horses still exists.

5. Tetanus

Tetanus is caused by a potent neurotoxin produced by Clostridium tetani, an anaerobic (not requiring oxygen) bacterium living in soil and feces. Bacterial spores get into the horse's body through injuries to the skin, both simple cuts, scrapes, and small punctures—and more serious, such as surgical incisions. (Though we often think of wounds from rusty objects, such as nails and barbed wire, as the source of the bacterium that causes tetanus, it's the injuries they create that are the offenders. Rust itself isn't the problem; rather, rusty objects are often found in places that harbor anaerobic bacteria.) Once they gain entry into the body, the spores produce toxins that reach peripheral nerves (via the bloodstream) and, ultimately, the central nervous system. Clinical signs include muscle spasms, stiffness, extended neck and head, third evelid prolapse, retracted lips, and an elevated tail. Some horses have difficulty breathing and can become recumbent. Treatment includes muscle relaxants, padding stalls for animals that have difficulty rising, removing infection (surgically and with antibiotics), neutralizing unbound toxin with antitoxin, and ensuring horses stay hydrated and receive appropriate nutrients. Despite treatment, up to 75% of affected horses die.

Every horse on every farm is at risk.

You think you've got good biosecurity. Your horses are on an isolated farm far from other equids. You keep the place clean and free of debris. There's nothing dangerous that your horse could get injured on. It doesn't matter. Veterinarians say there's really nothing you can do to prevent these core disease sources from getting onto your property and infecting your horses. "WNV, EEE, and WEE are carried by mosquitoes," says True, "Biosecurity can't really do much about that. If you're outside (when mosquitoes are active)

you're at risk." And horses, by their nature, are usually kept outside. As for tetanus, the casual bacterium is widely distributed "in the soil, so it doesn't matter if you have a beautiful place," True says. "Bacteria like beautiful places, too." Dr. Kimberly J. Harmon seconds that opinion. "Just because it's a well-cared-for horse in an endemic area doesn't mean it's not susceptible to these diseases," she

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