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“Approximately 10 years ago, Poulin Grain pioneered the use of high levels of fat in horse feeds with the introduction of 12% fat textured feeds. Poulin Grain has now taken this a step further with the introduction of EQUI-PRO™ Pro-Max 12%™, a pelleted 12% fat feed. This feed is another innovation from Poulin Grain in that it includes high quality soy-bean oil, extruded flax seed, beet pulp and live cell yeast culture. EQUI-PRO™ Pro-Max 12%™ is fully fortified with essential vitamins and minerals to ensure your horse performs.”



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Poulin Grain®

A Family Feed Company

Equine Feed Quarterly

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Feeding the Mature Draft Horse

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In recent years, the popularity and the use of draft horses has increased in the United States. Draft Horses can be categorized into three distinct types, namely Farm, Hitch, and the Pulling horse. The “Farm” horse will weigh around 1500 pounds and stand 16 hands or less. The “Farm” horse is used for a variety of activities and is quite versatile in that it can be used for both driving and riding in a number of activities on the farm. The “Hitch” horse will exceed 17 hands and weigh 1800 pounds or more. The “Hitch” horse is the draft horse version of a show horse. This horse typically pulls carts and wagons in single, pair, unicorn, four, six and eight horse hitches. The “Pulling” horse will vary in height and may weigh from 1600 pounds or less to 1700 pounds or more. These horses are used competitively in weight pulling contests and also in environmentally friendly farming and logging operations.

Much of our knowledge for feeding draft horses originated when draft horses were used as the mechanical power on farms. Traditionally, the farm and pulling horses were fed home grown grains and roughages. Farmers and ranchers often feed what they had on hand. Common feed grains provided to draft horses included oats, corn and rolled



barley. These may have been fed with protein and mineral supplements to avoid obvious nutrient deficiencies. Harvested forage that was traditionally fed to draft horses included timothy, alfalfa, grass or alfalfa-grass mixture hay. Grazing on native range, reseeded pastures, and crop aftermath was also typical.

The hitch or show horses used on city carriages and in parades and competition were fed some of the first formulated rations. These rations were designed to enhance hair coat, hoof quality and maintain show condition. These formulated rations included grains, protein supplements and vitamin/mineral fortification. These rations were the front-runners to today's diets fed to horses.

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Remington Steele

World Arabian Horse Organization – Horse of the Year

Remington Steele is an internationally recognized champion. At 24 years of age, he has competed and excelled at every facet of showing and performance. Remington Steele*++ has been named a champion in the show ring, competed successfully in endurance, and has been a movie star. In 2004, Remington Steele*++ was given the title of Living Legend and given a place of honor in the Kentucky Horse Park's – Horses of the World Exhibit.

Thank you for assisting with his feeding program. Remington Steele would not be the Super Star he is without the dedication of Poulin Grain's knowledgeable staff and excellent quality feed. Keeping a horse fit, in the correct body weight, for all the different divisions a versatile horse like Remington requires is a challenge. Your company, research team and representatives have always gone out of their way to solve our feed issues.

We are proud to be “Powered by Poulin Grain”



*Patti Demers Baily
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Modern feeding of draft horses requires an understanding of nutrient requirements according to age, size, stage of reproduction and work. Like light horses (Quarter Horses, Paints, Morgans, etc.), draft horses require a suitable combination of hay, pasture, grain and supplements to meet the nutrient and energy requirements for the type of activity being performed. Energy, or the calorie content of the diet, will vary greatly depending on the activity of the horse. Draft horses will have dramatically different energy requirements depending on speed and duration of work being performed. For example draft horses working at a walk will require less feed than horses working at a trot. Hitch horses performing at a rapid trot with high leg action may require twice the energy. Similarly, horses used in pulling contests will require large amounts of energy to fuel the short bursts of intense work. Energy is the only nutrient that dietary adequacy can be determined by visually looking at the horse. If a draft horse is being fed too much energy (calories) it will gain body weight. On the other hand, if it is being fed less energy than it is expending the horse will lose body weight or condition. Feeding the proper amount of energy will also depend on the rate of metabolism of the draft horse. Generally, draft horses have a very slow metabolism meaning they do not burn excess calories with unnecessary movement. Some horsemen translate their slow metabolism



Photo courtesy of Simpson Percherons

into the phrase easy-keeper, meaning the horse does not require a large amount of feed to maintain condition. However, not all draft horses are easy-keepers. Many of the horses used in show hitches require a tremendous amount of feed to maintain condition. In addition to energy, draft horses require protein, vitamins and minerals. The requirement for each nutrient depends on the physiologic function (pregnancy, growth, lactation, work) of the horse. Therefore, just as with light horse breeds, we can not feed all draft horses the same diet.

Many modern draft horse owners tailor their feeding programs to compliment different climates and geographic locations. These draft horse owners select grain concentrates that not only compliment the horse, but also the geographic region of the country. The following are general feeding guidelines for mature draft horses.

Approximate Feed Consumption

Idle Horses: can maintain body condition on good quality forage such as grass pasture, grass hay, alfalfa hay or grass, alfalfa mixed hay. This is typical when horses aren't being worked between seasons. Horse should be fed 1.5 to 2 lbs of hay per 100 lbs of body weight along with a low intake, protein, vitamin and mineral pellet.

Light work: horses typically can not maintain body weight without the additional calories provided by grain. Feed 1.5 to 2 lbs of hay per 100 lbs of body weight along with 0.3 to 0.5 lbs of fortified grain per 100 lbs of body weight.

Moderate work: feed 1.25 to 1.5 lbs of hay per 100 lbs of body weight along with 0.75 to 1 lb of fortified grain per 100 lbs of body weight.

Hard work: these horses are typically fed 1.25 to 1.5 lbs of hay per 100 lbs of body weight along with 1 to 1.25 lbs of fortified grain per 100 lbs of body weight.

Defining the amount of work, accomplished daily is relative. It may range from horses pulling an empty wagon in a parade to 8 to 10 hours plowing, haying or logging. The teamsters experience will determine the level of work performed and the necessary modifications to the amount of feed provided to maintain body condition.

As with any horse, the feeding management is critical to maintain proper health. Traditionally, working draft horses would be provided with the majority of their daily grain intake in the morning prior to work and at noon during rest. They would be provided with approximately 25% of the daily forage intake during these two meals. At night, draft horses would be provided with free-choice forage and small amounts of grain. Modern draft horses are typically fed both the grain and forage portion of their diet in two meals provided in the morning and evening. In any draft horse feed operation, several other feeding management practices should be followed:

- Feed horses regularly
- Keep managers free of dust and dirt
- On days off from work, reduce the consumption of grain the night before and during the day off
- Ration changes should be gradual and not abrupt
- Follow the feeding recommendations of commercial prepared concentrates.
- Horses need free access to fresh water
- During the winter, water in the tank should be ice free
- Horses should have free access to salt
- Most draft horses prefer loose salt over block salt
- All horses require vitamin and minerals supplementation to balance deficiencies in hay and pasture

The successful feeding of draft horses requires sound judgment and experience. Many of the feeding recommendations and rations formulated by animal husbandry professors in land-grant universities during the 1900's form the basic guidelines for feeding draft horses today.

Research Update

Weaning Methods For Foals

Dr. Stephen Duren
Performance Horse Nutrition

Weaning is a stressful time in the life of a foal. The weaning process often results in a loss of body weight by the foal and a decreased rate of weight gain during the two-weeks following weaning. Many horse owners struggle with determining which method to use when separating the mare from the foal. Weaning methods such as abrupt weaning versus gradual weaning (Malinowski et al., 1990, J. Equine Vet. Sci. 10:363) and abrupt weaning versus paired weaning (Hoffman et al., 1995, J. Anim. Sci. 73:2922) have each been studied to determine foal stress. Another method of weaning has recently been studied called "take-away". In this method, a group of mares and foals is kept in a large paddock. One mare is removed from the group of mares and foals every three days. The weaned foal is kept with the other mares and foals with no change in routine. A cooperative study between The Ohio State University Agriculture and Technology Institute and the University of Kentucky studied abrupt weaning versus take away weaning in a group of nineteen foals. Body weights were taken from each foal at 2 week intervals for 4 weeks prior to weaning, at weaning, and every 2 weeks after weaning for 6 weeks. Body weight and average daily gain did not differ for the two groups of foals prior to, or at weaning. For the 2 weeks after weaning, average daily gain decreased in both groups of foals. By six weeks post-weaning both groups of foals were growing normally with no difference in rate of gain between the two methods of weaning.

This study reflects previously noted studies which show that one of the stresses of weaning is a depression in body weight gain with weight gain typically recovering after a few weeks. It can be concluded then that weaning foals using the take-away method holds no advantage over weaning abruptly with respect to body weight gains.

Reference: A comparison of two different weaning methods on foal body weight gain. D.M. Powell and L.M. Lawrence. 2005. In: Proceedings of 19th Equine Science Society. Pg 333.



Question & Answer with Dr. Stephen Duren

What is colic?

Colic is a generic term for abdominal (belly) pain. This pain can originate from any of the organ systems contained in the abdomen. Colic is most often associated with the digestive system, but problems with the liver, kidneys, and reproductive organs can also produce pain symptoms. Horses experiencing colic display pain symptoms in many ways. Pawing, looking at the belly, repeatedly laying down and rising, rolling, sweating, leaving feed uneaten, and grunting or groaning are a few common colic symptoms.

What dietary factors predispose a horse to colic?

The scientific community has identified several risk factors for horses developing colic. The incidence of colic increases as the amount of grain in the diet is increased. Horses on pasture or horses eating mostly forage diets are less likely to colic than horse being fed five or more pounds of grain per day. Lush pasture can be a cause of colic, as it contains an abundance of rapidly fermentable carbohydrates and minimal fiber. Rapid fermentation of carbohydrates can lead to gas production and colic. Mature, low-quality hay and straw can cause impaction colic due to poor digestion of fiber in the gut. Feeding changes can also cause colic. Changing the type and amount of forage (hay or pasture) or grain are risk factors associated with colic. Contamination of feed with mold or foreign material (plastic, aluminum cans, insects, rodents, etc.) can lead to a colic episode.

What can be done to prevent colic in horses?

Several management strategies will help minimize the occurrence of colic. First, it is important to realize the natural diet for horses is forage. Maximize the amount of high-quality hay offered while limiting grain intake. Grain should be fed at the minimum level necessary to provide energy, vitamin, and mineral fortification. Horses are anatomically designed to be continuous grazers. Try to feed horses in such a way to provide small frequent meals rather than a single large meal. Maximize the opportunity for horses to have free access to exercise. Horses that are confined to stalls for long periods of time are more likely to colic. Dietary changes should be minimized. If dietary changes are necessary, plan ahead and make changes slowly over a two-week period. Access to fresh, clean water is always essential. Routine veterinary care including deworming and dental care is necessary to reduce the risk of colic.