2021 USAFRI Research Project Objectives

Producer and Consumer Survey: Increasing Alfalfa Hay Sales to Horse Owners
University of Kentucky - Smith

Project Award: $27,082

Justification:
- The American Horse Council (AHC, 2017) estimates that there are more than 7 million horses in the U.S., approximately half of which are utilized for recreational purposes, while the other half are utilized for horse competitions (including racing and showing), for work and for breeding. Horse diets are based predominantly on forage, often a combination of pasture and hay (de Melo Vasco, 2020). In the upper Midwest, approximately 95% of horse owners provide additional forage to their horses when pasture is dormant and 70% of horse owners provide additional forage to their horses even when pasture is available (Mastellar et al., 2018). For horses maintained in urban and suburban environments, and for horses kept for racing and competition, pasture access is typically limited, and hay is the forage of choice. There are no data available that define the amount of hay used annually in the U.S. for horses, but it likely exceeds 3 million tons and may be upwards of 10 million tons. Few horse owners produce their own hay, and thus purchase hay from local producers, hay brokers or feed stores.

- A wide variety of hays are used in horse feeding programs. The predominant grass hay often varies with region, with warm season grasses being more prevalent in the south compared to the north (Gibbs and Cohen, 2001; Hoffman et al., 2009; de Melo Vasco et al., 2020). However, surveys of feeding practices suggest that many horse owners rely on the use of grass hays or mixed hays rather than alfalfa (Gibbs and Cohen, 2001; Hoffman et al., 2009; de Melo Vasco et al., 2020).

- Individual preference among horse owners seems to be a significant factor in selecting grass hay rather than alfalfa hay. Alfalfa hay usually contains less neutral detergent fiber than grass hays and is therefore more easily digested by horses (Crozier et al., 1997). Alfalfa hay will provide more calories per pound than grass hay and less alfalfa is needed to meet energy needs compared to grass hays of a similar maturity. In addition, alfalfa hay is high in calcium in comparison to grass hay and it provides more digestible protein and more available amino acids (Woodward, et al., 2011). Compared to grass hay, alfalfa may convey advantages to horses in regard to gut health. Because alfalfa provides more calories per pound than grass hays, the amount of concentrate needed to meet energy requirements can be reduced. Because high intakes of grain-based concentrates may increase the risk of gastrointestinal disease in horses, including colic (Tinker et al., 1997), feeding alfalfa may reduce the risk of colic. In addition, a decreased risk of equine gastric ulcers and improved gastric health has been associated with feeding alfalfa as compared to grass hay (Nadeau, et al. 2000; Bauerlein et al., 2020).

- There are clear benefits to alfalfa hay as a forage source for horses. Nonetheless, horse owners more commonly feed grass hay or mixed hay than alfalfa hay. The purpose of this project is to investigate the attitudes of horse owners towards alfalfa hay. Once the sources of discrimination against alfalfa are recognized, appropriate strategies can be formulated to overcome anti-alfalfa opinions.

Objectives:
- The objectives of this project are to 1) conduct two surveys on horse hay production and use across the U.S. (i. identify hay buyer attitudes/preferences when buying alfalfa and other hay for their horses; ii. identify hay producer/hay broker attitudes, production methods, and hay types when producing and selling alfalfa and other hay to horse owners); 2) use the results of the surveys to determine the

attitudes/perceptions and production/marketing/distribution practices that limit the use of alfalfa hay for horses; and 3) develop publications, factsheets, and conference presentations that will increase the use of alfalfa and alfalfa/grass hay by horse owners.