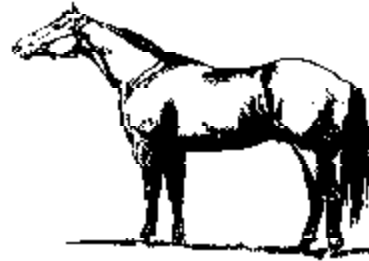


Extension Animal Science Horse Information Series



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FEED FAT TO OLDER BROODMARES

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Eating extra fat is not recommended for humans. In fact, many individuals eat as little fat as possible.

But, adding fat to the ration of older broodmares may be an advantage.

Unfortunately, horse breeders are well aware of the decreased fertility of older mares. Research indicates that once mares get to be 16 years of age their reproductive efficiency decreases.

Many older mares become pregnant but do not stay pregnant. Early embryonic death (EED) is quite common in older mares.

In the first 14 days of pregnancy, EED occurs in about 9 percent of young, fertile mares. But, it occurs in 62-73 percent of older, sub-fertile mares.

There are many reasons that older mares have fewer foals than younger mares. One is

their ova (eggs) are older, which probably contributes greatly to EED.

Lesions in the oviduct increase with age and may retain the embryo longer than normal. Usually, the embryo takes six days to travel through the oviduct.

Hormonal factors also influence EED. Progesterone is essential for the maintenance of pregnancy. Reduction of progesterone can lead to EED. Lower progesterone levels have been observed in older mares.

The importance of including sufficient fat in the diet to support ovarian function has been shown in beef cattle. Benefits of adding fat to the rations of horses has recently been recognized.

Texas A & M University researchers fed 18 pregnant Quarter Horse and Thoroughbred mares either a typical low-fat horse ration or one with added fat. Fat is utilized in the body's production of progesterone.

There was not any difference in the amount of progesterone produced by either group of mares.

But, when only mares 10 years of age or older were included in the data, there was a difference. Fat-fed older mares had higher levels of progesterone. So, there may be an advantage to feeding older mares fat, especially if they have a tendency for EED.

This data also showed that mares less than 10 years of age had higher levels of progesterone than older mares.

Other research at Texas A & M University showed that feeding fat to broodmares in late pregnancy and early lactation was beneficial. Mares fed fat-added rations ate less feed, had shorter postpartum intervals, required fewer estrous cycles per conception and had a

higher pregnancy rate than mares fed a control ration.

Adding fat to the rations did not increase size of foals at birth, weight gain or height of foals at 60 days of age. But, foals from fat-fed dams tended to gain more weight the first week of life and have thicker fat measurement over their croups at 60 days. Milk from fat-fed mares had a higher percentage of fat at 10 and 60 days.

At this time of the breeding season, many older mares may be pregnant. Adding fat to their ration may be another way to help keep them pregnant. Normally, about 6-7 percent of fat is added to the concentrate feed.

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