

Down on the Farm



Mare Reproductive Loss Syndrome

By **BETTINA COHEN**

Spring has given way to summer, and still we have no definitive statement explaining what caused Mare Reproductive Loss Syndrome (MRLS). Countering a query about changes in mare or land management next year with one of his own, Mike Owens, farm manager for Gary and Betty Bizsantz's Cobra Farm, near Lexington, summed up why devising a preventative course of action at this time is impossible. "How are we going to get aggressive over something that we don't know?" Owens asked.

Cobra had only one early pregnancy loss. By comparison, only about half of the mares Trudy McCaffery and John Toffan board in Kentucky are in foal. They have 20 broodmares in California, and the same number in Kentucky, divided between Mill Ridge, Lane's End and Glennwood Farms. They had losses at all three farms, but see no reason to panic. "I'm certainly not going to start shipping horses out of Kentucky just because of this situation," McCaffery said.

Marty and Pam Wygod lost three early pregnancies out of a dozen or so mares in Kentucky, and considered bringing them home to their River Edge Farm Inc., in Buellton, Calif. Not wanting to expose a home herd of 150 mares, some belonging to clients, to a possible communicable risk, or to expose their visiting mares and foals to shipping stresses, they overrode the impulse. "If we only had one mare, I would consider bringing her home," said farm manager Russell Drake, who is bothered that the cause remains unknown.

If MRLS was a one-time occurrence, as everyone with a stake in the industry wants to believe, then prevention is a moot point, and breeding season in Kentucky next spring will not see a repeat of this spring's storm of early pregnancy losses at 40 or more days after conception. But along with the early pregnancy losses, there was an equally alarming storm of late term losses from this spring's foal crop. The immediate concern is whether mares bred in 2001, that remained in foal, will deliver live foals in 2002. Equine insurance under-

writers, for example, are not writing prospective foal coverage for most mares boarded in Kentucky this spring, if they were bred in February, through as late as mid-April. The rejections are based on the assumption that those fetuses had the greatest exposure to risk. In mid-April, wild weather changes apparently set off the syndrome.

Some horsemen downplay that concern. "Our concept is, the mares that are carrying foals right now, those foals are going to come out in fine shape. They're not going to be compromised," Owens said. "If they're compromised, the mares are going to spit 'em out long before full term."

"Really, the only thing we can do at the moment is just monitor with ultrasound," said Walter Zent, DVM, a reproductive vet with Hagyard-Davidson-McGee, one of the Lexington-area equine clinics that was on the front lines of the MRLS attack this spring. An ultrasound reading of a fetal heartbeat confirms that the fetus is alive.

Come next spring, Owens acknowledged, farm managers will be "watching how these first few foals come out a little bit closer, and *if* they start having problems (abortions or premature foals), they're going to get very aggressive" with antibiotics.

While unable to provide MRLS prevention tips, this article reviews several facets of mare and land management which should put some MRLS concerns into perspective, and which will be useful anywhere.

Mother Nature, Mother Earth

California breeders who are considering breeding and boarding a mare in Kentucky next spring might wonder, will my mare conceive, and stay in foal?

Always, anywhere, that question deserves individual attention with respect to every Thoroughbred mare. Breeding Thoroughbreds is a high risk business. Breeders who stay in the business learn to accept losses, and be resilient. When she received news of their first few losses, McCaffery recounted, "It didn't really alert us. That's nor-

mal. When you got that many horses, it's bound to happen."

The early weeks of pregnancy, from 14 to 28 days post-breeding, should be monitored with ultrasound to catch any early fetal losses. When very early losses are caught, the farm where the mare is boarded can send the mare back to the breeding shed.

MRLS accounted for an unusually high number of fetal losses after 42 days. Even in a normal year, mares bred back after losing a pregnancy that had gone 42 days or longer, stand little chance of getting back in foal that season. That is just 'Mother Nature.' Endometrial cups form around week six and prevent the mare from cycling normally for 120 days after the lost fetus was conceived. Sometimes she'll ovulate, sometimes not. "There are hormonal and physiological reasons why you're not getting this mare back in foal," Zent said.

Progesterone therapy, or the comparable product, Regumate, can help preserve pregnancies for progesterone deficient mares. Hormone therapy is practiced too liberally, in the opinion of some veterinarians, because it is not known to do harm, and because some farm managers simply feel better taking every edge. There is no evidence it will prevent further loss from MRLS. Hormone therapy is usually prescribed beginning 28 days after the mare is bred and she is pronounced in foal, though in some cases it might be started right after the mare ovulates. It usually continues up to 150 days in pregnancy, though for some mares, it will be continued for the whole gestation.

Central Kentucky experienced abrupt swings in climate this spring—84 degrees on April 7, a snow shower and 29-degree freeze on April 17, followed days later by a return to above 80 degree heat and drought. Those weather extremes are blamed for causing the leaves of wild cherry trees to wilt and produce cyanide, a favorite food of Eastern tent caterpillars. Adding to the MRLS mystery, Kentucky farms were awash in the crawling parasites in late April and early May. It is not known how horses ingested cyanide, but investigating scientists believe this to have caused MRLS, and suspect caterpillars were involved.

"Frost and freeze situations, are we going to keep horses in? I don't think so. Some might," Owens said. "We're going to continue clipping our fields, we're going to continue spraying for tent caterpillars. The people that do the commercial spraying might see some business pick up. We're not going to cut down our cherry trees. We are going to keep them trimmed and limbed, and anytime something falls on the ground, we're going to pick it up."

The early suspicion about mycotoxins from frost and drought damaged pasture causing MRLS, set off a blur of mowing activity around the Bluegrass region, despite the fact that in May, Kentucky pastures were burned a tawny yellow from drought. Mowing, especially beneath fence lines, is important. Birds sit on fence and utility lines. Their drop-

pings sometimes contain seeds, which later sprout. One theory for how mares could have ingested the cyanide is from grazing on highly toxic cherry tree sprouts.

Unrelated to mycotoxins, Kentucky farm managers have long known that fescue toxicosis is a potential danger in the grass. Fescue is an excellent pasture grass because of its durability and resistance to drought. Fescue was not associated with MRLS. But, pasture must be seeded with endophyte-free fescue. Fescue toxicosis from endophyte-infected Kentucky 31 fescue can cause reduced or no milk production (agalactia), prolonged gestation, difficulty in foaling (dystocia), premature separation of the placenta (red bag delivery) and dead or abnormal foals. If there is any question that fescue in the pasture contains the plant dwelling endophytes, Domperidone can be administered, beginning 30 days prior to the expected foaling date.

Early into the MRLS storm, tests ruled out a viral epidemic.

Nevertheless, this was a reminder. Vaccinating mares regularly, with the final vaccination of pregnancy coming four weeks prior to the expected foaling date, is good preventative management.

On any horse farm, management means attention to detail. California breeders who board mares in Kentucky might

feel better calling the farm to ask about management practices. "As much as anything, they needed to have been asking the questions all along," Owens said. "They need to be comfortable with where they're sending their mares."

Capricious as it was quick, some farms escaped MRLS unscathed. One farm owner who'd had no losses attributed it to luck, rather than prescient farm management.

McCaffery commended the Kentucky Thoroughbred industry for acting quickly to get a handle on the syndrome, and believes MRLS was beyond the control of farm management. "We'll see what happens next year, but I truly believe it was just an unfortunate freak of nature," she said.

Note: This story was filed July 13. Recommendations for preventative measures will be made, if the cause is ever identified. A July 2 briefing from the University of Kentucky Maxwell H. Gluck Equine Research Center continued to identify cherry trees and cherry tree seedlings in and around pastures, deciduous trees stripped of foliage, and the presence of Eastern tent caterpillars, as the main risk factors associated with MRLS.

Investigating scientists are analyzing data from an 11-page survey of Central Kentucky horse farms that went out May 30. Of 150 farms initially contacted, 133, or 89 percent, participated. The 133 farms represent over 17,000 horses present on the premises as of April 1, 2001, and included Thoroughbred, Standardbred, American Saddlebred and Morgan horse farms, located in multiple central Kentucky counties.

In a July 13 briefing, University of Kentucky reiterated, in response to a July 12 media report, that no definitive diagnosis had been made.

Five General Management Tips:

1. Ultrasound mares at 14 and 28 days post-breeding.
2. Progesterone therapy for progesterone deficient mares.
3. Mow pastures. Mow below fence lines.
4. Seed pastures with endophyte-free fescue. Administer Domperidone in last 30 days of pregnancy, if there was risk of endophyte exposure.
5. Vaccinate mares regularly, and at four weeks prior to expected foaling date.