

Wildlife Biologist Offers Tips On Deer Management Permit Pens

Posted on April 21, 2011 by admin

This is a very informative article on DMP pens and regulations by Micky Hellickson. Special thanks to **Livestock Weekly's Colleen Schreiber**.

Dr. Mickey Hellickson has been helping landowners design deer management permit program pens since 2003. In total he's worked with 19 landowners in Texas and five in northern Mexico to build 80 DMP pens involving more than 70 DMP permits.

Hellickson, a wildlife biologist and principal of Orion Wildlife Management Services, has been on the speaker circuit quite a lot already in 2011. In February he spoke to those attending the 21st Century Deer Management Workshop and the Texas Deer Association's Superior Genetics Whitetail Deer Auction. The event is held in conjunction with the San Antonio Stock Show and Rodeo.

Hellickson offered an overview of the deer management permit program and discussed the why, how, when and where of the program, as well as some of the results landowners could expect from implementing a DMP on their property. First he reminded listeners that the DMP permit is only available to landowners whose property is high fenced or who have a pasture within their property that is completely high fenced.

The permit allows the landowner to trap wild, unbred deer from the high fence portion of their property and place those deer into a breeding facility. Both breeder bucks and breeder does may be used in the DMP pens. The maximum number for one breeder pen is one buck and 20 does.

"The breeder bucks can be liberated onto the ranch or they can be returned to a deer breeder," Hellickson said. "However, if you use does in your DMP pens, they have to be released with the fawns when you open the pens."

Landowners may also use a TTT (trap, transport and translocate) permit to capture does from another ranch to place directly into a DMP pen on properties that have the required permit. However, he noted that no TTT deer trapping can occur on a ranch where deer held within a DMP were released onto that ranch during the same permit year.

"In other words, if you're turning deer out of your DMP pens after August 31, you cannot triple T deer off of that same ranch until the following year."

He pointed out that each ecoregion within Texas has its own unique deadline for trapping deer and getting them placed in DMP pens. In the South Texas ecoregion, for example, deer must be trapped and placed within the DMP pens before December 15 and must be released on or before October 30 of the following year.

Hellickson pointed out that pen construction and deer capture are not cheap. On average, the cost for capturing

does and putting them in a DMP pen, he said, is \$150 to \$200 per doe. That cost can increase dramatically when it comes to catching bucks; more search effort is typically involved because landowners are usually trying to locate the biggest, best buck. Choosing to use breeder bucks as sires in DMP pens, either through purchase or lease, can also be quite costly. Add to that the maintenance of the deer once they're in the breeding facility. Feeding deer for 11 months is not cheap.

"Given all these expenses, why are landowners so interested in the DMP program? Simply to maximize the breeding efforts and the number of offspring that result from the biggest bucks that that landowner has on his property," Hellickson remarked.

"Prior to the completion of a recent DNA study, many of us in this room probably thought that nearly all the big-antlered bucks did all the breeding. I know I did," he continued. "I thought wrongly that the big-bodied, mature bucks monopolized the breeding and that they bred the majority of does on your property. Turns out we know a whole lot less about deer breeding than we thought."

Deer managers, biologists and landowners alike did not really know who was breeding whom until Dr. Randy DeYoung, a research geneticist with the Caesar Kleberg Wildlife Research Institute and assistant professor at TAMU-Kingsville, completed his PhD research in which he studied the DNA of white-tailed deer. Three study areas were involved; one in Oklahoma, one in Mississippi, and another on the King Ranch in South Texas. On the King Ranch study site DNA was collected from 439 deer. Through DeYoung's DNA work he was able to match up 70 offspring to 46 different bucks, and what he found was that yearling bucks sired 11 percent of those 70 offspring. In addition, 2.5 year-old bucks fathered 22 percent of those 70 offspring.

"Yearling and two year-old bucks are breeding one-third of the does that are producing one-third of the fawns," Hellickson commented.

The 3.5 year-old and older bucks fathered 67 percent of the 70 fawns. DeYoung also found that over a three-year period no bucks sired more than five offspring in a single year. He found that successful bucks sired an average of only 1.5 fawns per year. Over the length of the study, successful bucks sired an average of 2.5 fawns. Additionally, DeYoung discovered that 20 to 30 percent of twins were sired by different fathers about one third of the time.

"The conclusion that Dr. DeYoung made was that lots of different bucks are involved in the breeding, and he wasn't able to find any relationship between antler size and breeding success," Hellickson told listeners.

The results of this study, he added, have led to increased use of the DMP permit, because through the DMP system, landowners can be assured that the biggest bucks are successfully siring offspring.

"In the wild, individual bucks are siring an average of 1.5 fawns annually," he reiterated, "but if you put your biggest buck in with 20 does, on average you're going to get 30 fawns out of that buck instead of 1.5. That's really the reason more people are using the DMP permit."

Hellickson next discussed specifics on the building of DMP pens. The deer breeding pens must be a minimum of five acres and a maximum of 100 acres in size. Additionally, the breeding facility must contain a minimum of

50,000 square feet of brush.

“Up until this past summer TPWD allowed DMP pens that were less than five acres to be enrolled as long as they had at least 50,000 square feet of brush. That is no longer acceptable. All pens as of last fall going forward have to be at least five acres.”

Hellickson recommended that landowners locate DMP pens near the ranch headquarters to maximize surveillance, protection and access to the DMP pens. Because of the minimum 50,000 square feet of brush (about 1.25 acres) required within each pen, he also said it makes most sense to build the pens in a heavily brushed area. Furthermore, he said, DMP pens should be built on higher elevation, away from drainages and in an area where a permanent source of water is available and near all-weather access roads.

When releasing deer out of the DMP pens, at least 20 feet of the perimeter fence of the DMP pen must be opened to allow the deer easy access out of the pen, and it must remain open for a minimum of 30 days following the release. Supplemental feed and water provided in the DMP pen needs to be stopped when the deer are released, and the pen must remain free of supplemental feed and water for a minimum of 30 days after those gates are opened or the fence is raised.

Hellickson suggested placing supplemental feed and water just outside the DMP pens.

“What you’ll find is that once you open those gates, those deer that have been living in those pens for 11 months learn that as their new home range, and even with the gate open, some of them are reluctant to leave. They tend to come and go for a week, maybe two weeks, so that’s why it’s important to have feed and water available just outside the pens.”

Another reason for providing food and water outside the pens, Hellickson said, is because some does will abandon their fawns as soon as the gate is opened, so as a precautionary measure it’s important that those orphaned fawns continue to have access to feed and water.

“During the release all you need to do is open the gates; don’t try to push the deer out,” Hellickson told listeners. “If you try to push them out, that’s going to get them really stressed, and it will cause even more does to abandon their fawns right at that critical time. Just open the gates and let the deer come and go.”

Some DMP permit holders set up trail cameras at the gate entrance to monitor the coming and going of the deer out of the DMP pens.

“That’s how we know it takes two, three, four weeks for the deer to finally vacate the DMP pens.”

Ideally, Hellickson said, the deer density outside the DMP pens should be low so that the deer have plenty of room once they’re released from the DMP pen. If the population is too high, the deer being released will likely have a harder time assimilating back into the population.

Hellickson offered some additional recommendations regarding pen construction. First, if finances allow, he recommended a nine to 10-foot fence rather than the standard eight-foot high fence to reduce the risk of deer

escaping. Another suggestion was to use a single panel instead of two four-foot panels.

Gaps under all the gates need to be tight so as not to allow coyotes to pass through. He told a story of a landowner who did not have tight gaps in the gates and the additional apron, who lost a significant number of fawns to coyotes.

“Probably the best solution is to use cement under the gates,” Hellickson told listeners. “I also recommend an additional four-foot section of netwire be attached to the bottom strand of the exterior fence of the DMP pen and then buried to keep coyotes from digging underneath.”

Water troughs, he said, should have interior ramps to allow animals that fall into the water a method to escape.

“I heard of one landowner with a set of DMP pens that had a raccoon fall inside the trough that couldn’t get out. That was the only source of water for his 21 deer, and they all died from botulism because they had to drink contaminated water caused by the dead raccoon.”

The DMP pen construction must be completed before the first permit application is submitted. In fact, the local TPWD biologist must first review the application and then inspect the pen or pens and sign off before the application may be submitted. There is a \$1000 non-refundable annual fee associated with the DMP permit. Landowners may have multiple pens under one permit. The deadline to apply is November 30. However, for those who live in one of the ecoregions with a late October deadline for placement of deer into the DMP pens, those applications are due well before November 30.

As for choosing which deer to use in the DMP pens, Hellickson recommended breeder bucks as sires though he told listeners that it’s really a personal choice.

“Some prefer to use native-born deer as sires, but if the choice were left up to me, I think you’re going to grow bigger deer quicker by using breeder bucks.”

He also recommended when possible selecting younger bucks as sires as they are more capable of covering the does in a timely manner.

“You especially want to use younger bucks if you’re putting the maximum number of 20 does in your DMP pens,” Hellickson stated. “I recommend two, three, maybe four year-old bucks in the DMP pens so they get those does covered the first time they come in heat. I know of some landowners when they turned out the deer on August 31 they were turning out pregnant does. Those fawns born in September probably aren’t going to survive.”

If an older buck is used, Hellickson recommended only 15 does per pen rather than the 20 allowed by TPWD.

He also suggested recapturing the DMP female offspring at one or two years of age to be put back into the DMP pens.

“That allows you some selection on the doe side of the equation,” he explained.

Hellickson next discussed some of the results that can be expected from a DMP program. To date, little scientific research has been conducted on the DMP program, he told listeners, but the early results indicate bigger antlered deer are being produced.

He was involved with one study with the CKWRI conducted on a ranch in Webb County. This particular ranch had six DMP pens in operation for five years. Researchers randomly captured one, two and three year-old bucks within the portion of the ranch where the DMP pens were located. They also randomly captured bucks on an adjoining pasture without DMP pens. They then compared antler size of yearlings from the pasture with DMP pens to yearling bucks in the pastures without DMP pens. They did that for two and three year-old bucks as well.

The yearling bucks captured at random in the pasture with the DMP pens had an average gross Boone and Crockett score of 37 inches compared to 31 inches for the non-DMP pastures; 2.5 year-old bucks had an average gross score of 89 inches and 74 inches for the non-DMP pastures, and the 3.5 year-old bucks had an average gross score of 121 inches in the DMP pastures versus 102 inches in the non-DMP pastures.

"DMP-produced bucks should be larger on average than non-DMP produced bucks on your property," he reiterated. "However, gains may be smaller than one might expect because most are still dealing with selection only on the buck side of the equation, though there are some who are using breeder does in their DMP pens.

Another expectation from the DMP program, he said, is a large fawn crop in the DMP pens and high fawn survival.

"If you wait until the October 30th deadline to release, then you should have about 150 percent fawn crop, which is phenomenal. There is no way to match that without using DMP pens."

He shared data from another ranch in Webb County that has five years of production data from three DMP pens. The ranch staff ground searches the DMP pens in July and hand captures, marks and sexes the fawns. During the first summer in the two DMP pens they were able to capture 23 buck fawns and 23 doe fawns. During the second summer there were three DMP pens and they captured 42 buck fawns and 34 doe fawns. In the third summer they were 39 buck fawns and 30 doe fawns, and in the fourth summer 44 buck fawns and 46 doe fawns, which combined gives an average fawn crop of 150 percent.

"So if you go with 20 does per DMP pen, you're going to get about 30 fawns per pen out of that one buck."

The range in fawn production varied from 1.05 fawns per doe to 1.85 fawns per doe, but the average is 1.5.

Additionally, this particular ranch does a random yearling buck and buck fawn capture every year in January. They also conduct an intensive trail camera survey at all their supplemental feeder sites. Because they uniquely tag the DMP offspring, they're able to identify them when they visit a feeder site. Through these additional efforts this ranch has been able to monitor the success of its DMP program.

"Some landowners like to release pregnant does from their DMP pens, but I recommend against this," Hellickson reiterated. "I just can't imagine having that kind of fawn production, that kind of fawn survival if

they're dropping their fawns out in the wild. Fall surveys on non-DMP ranches typically count a 50 to 75 percent fawn crop, not a 150 percent fawn crop."

A member of the audience asked if holding fawns longer in the DMP pens — releasing them in October rather than August — meant they would be less adaptable and less able to survive in the wild. Hellickson reiterated that based on fall aerial surveys this year, the two additional months made a huge difference in fawn survival.

"Those fawns are two months older, two months bigger, and I think they're better able to keep up with their moms when they're turned out, so we see a lot less abandonment and higher survival."

Another participant asked about the best method for capturing fawns while in the DMP pens.

"The most successful landowners are doing daily or every other day ground searches through their DMP pens beginning the last week of June," he responded. "I know some landowners who purposely constructed their DMP pens long and narrow and they custom built a guild net that they'll stretch across from one side of the DMP pen to the other. The doe will jump over that netting and the fawns run into it and then they hand catch the fawns."

In the question and answer period there was some discussion about getting the DMP program expanded to include those who don't have high-fenced properties.

"I know it's been addressed in Austin," Hellickson said. "One of the reasons it hasn't been approved up to this point is they're afraid it will cause bad relations between neighbors where one low fence neighbor is worried that the biggest buck is on the neighbor's side when he's doing DMP captures and the neighbor might capture that big buck."

Hellickson also noted that a bill going through the legislature deals with DMP for mule deer, and there is not a specification for high fence within the bill.

"Different animal, different region," Hellickson said. "It does not apply to whitetails."

Hellickson concluded by pointing out that all the requirements of the DMP permit are available on the Texas Parks and Wildlife Department website.

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