



IBR Vaccines and Vaccination Programs

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You should consider several changes in IBR vaccination programs for your cattle because of new vaccines developed during the last few years.

Three kinds of IBR vaccine are now available. They are a modified live virus for intramuscular injection, a modified live virus vaccine for intranasal administration and a killed virus vaccine for intramuscular injection.

Modified Live Virus Vaccine

The modified live virus vaccine for intramuscular injection has been available for over 20 years. This vaccine must not be used on pregnant cows because it can cause abortion. For many years we thought that one injection to an animal 6 to 8 months old probably resulted in lifetime immunity. Our thinking has changed in recent years. We now recommend that animals (particularly replacement heifers) be vaccinated when they are about 6 months old and again 30 to 60 days before breeding. After that the animals should be vaccinated every 3 to 4 years. This booster also should be given 30 to 60 days before breeding. Older cows which have not been vaccinated previously or whose vaccination status is not clear should be vaccinated 30 to 60 days before breeding as well.

Some question exists whether vaccination of suckling calves can transmit the virus to cows carrying calves, thus causing abortion. One study has indicated that this may have happened, although millions of suckling calves have been vaccinated without adverse affects. Because of this incidence, however, some recommend not to vaccinate calves while they are still on the cow.

Intranasal Vaccine

The second type of vaccine commonly used against IBR is the intranasal vaccine. You must take care to administer this vaccine deep into the animal's nostrils, however. Even with proper precautions the animal may blow the vaccine out before it can reach deep into the respiratory system to do the job. Most intranasal vaccines can be given to pregnant cows but you should carefully read the directions, as some have been marketed before proof of use in pregnant cattle was established.

The duration of immunity from intranasal vaccines is unknown so most manufacturers recommend annual vaccination. All intranasal vaccine against IBR is combined with parainfluenza (PI3) vaccine which does require an annual booster for protection against PI3. The two big advantages of modified live virus intranasal vaccine are that it can be given to pregnant cows and that it does confer some immunity rapidly (48 hours) while the injectable modified live virus or killed vaccines require about 14 days. The disadvantages are that virus is shed for a few days after vaccination, it is more difficult to administer and it is more expensive. In cases of outbreaks, intranasal vaccines do offer early protection to animals not showing symptoms.

Inactivated or Killed Vaccine

The third type of IBR vaccine is the inactivated or killed vaccine, provided in combination with killed *Pasteurella* bacteria and killed PI3 virus. It is administered intramuscularly and must be readministered annually. Controversy over its effectiveness has not been resolved. The advantage of this vaccine

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is that it eliminates the chance of spreading the virus to susceptible animals or other adverse reactions sometimes seen with modified live virus vaccines. The disadvantages are that the vaccine can cause an anaphylactic reaction and that it must be repeated annually.

Vaccinating breeding bulls is a special problem. Some purebred buyers, especially those buying bulls for artificial insemination, discriminate against bulls with positive IBR blood test. In general, how-

ever, bulls used in cow-calf operations probably should be vaccinated.

Consult your veterinarian to determine which vaccine is best for your purpose, since each vaccine has its own merits and disadvantages. Each herd of cattle has different requirements.

Because of the high prevalence of IBR virus in cattle, we recommend that you follow a vaccination program against IBR for your herd no matter what vaccine you choose.

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