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Florida Cooperative Extension Service

Vaccines and Beef Cattle¹

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Always remember: if the resistance level of an animal stays above the disease challenge, a healthy animal results (Figure 1).

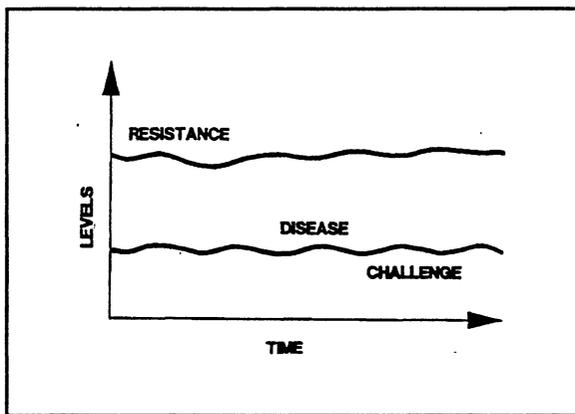


Figure 1. When the resistance level stays above the disease challenge, animals stay healthy.

It is to our advantage to keep a safe spread between the resistance level and the disease challenge level; the greater the spread, the safer it is for the animals. We use vaccines to increase that spread, by raising the resistance of an animal or herd of animals to selected disease challenges (Figure 2).

To properly immunize cattle against diseases, you must recall how each of the vaccines is formulated, what is the route of administration, how does the body respond to the vaccine in the presence or absence of maternal antibodies, and how many doses

are required to stimulate the body to produce adequate levels of resistance against a particular disease. There are four vaccine forms.

- Replicating -- Modified Live (ML)
- Non-Replicating -- Modified Live
- Inactivated Non-Replicating
- Intra-nasal

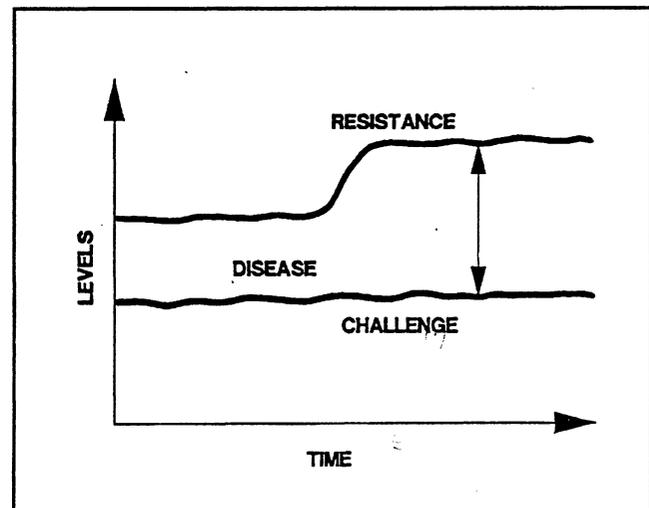


Figure 2. Vaccines raise the resistance level.

Replicating -- ML Vaccines. These vaccines must replicate (reproduce) in the animal's body before the resistance level is increased. Usually only one dose of replicating vaccine will stimulate high levels of long-lasting resistance in an animal. Failure of the vaccine

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