that the additional stress of vaccination at this time
does not greatly affect the calf. To delay the
vaccination for the bovine respiratory complex at
this time results in an additional stress perio-
during the calves are vaccinated. This plus the fact
that some of the calves will be in the incubation stage
of the disease will give variable results to the
program. The calves can be put on feed and raised
to the second feedlot ration. This will permit
dropping back one ration upon moving to the
feedlot, which will help reduce the new stress to
the calf.

This is just one possible disposition of the calf
by the livestock producer. Others sell their calves
for grazing or feeding purposes to others. Always
encourage true pre-conditioning at every oppor-
tunity. Even if a calf just knows how to eat out of
a trough, it makes our handling of stocker cattle
much easier. Calves properly vaccinated for the
bovine respiratory complex and Clostridium
species should be a part of any cow-calf program.
The proper control of internal and external
parasites and the weaning of the calf and teaching
it to eat and drink should be accomplished before
it ever leaves the farm or ranch. People to a large
extent are creatures of habit, so to speak. In the
past, cattle were gathered and shipped and the
buyer assumed all of the responsibilities mentioned
above. Sickness and death losses under this
program ran into the millions of dollars yearly.
Now we are beginning to see a change in the
marketing and handling of calves. More producers
are beginning to pre-condition their calves before
they sell them. It should be part of our duties as
consultants to encourage these procedures and
make them become a routine habit. The results will
be apparent to all who work with stocker and
feedlot cattle.

In conclusion let me stress these points. Work
with the livestock producer. Plan your program to
coincide with the normal handling of the cattle.
Encourage pride of ownership and pride in
delivering a superior product. Begin a simple
program and add to it as it becomes necessary.
Many of my programs began as pregnancy testing
of the cows each fall. As conditions change, we are
able to show the producer why we should go
forward and add other parts to our herd health
program. Above all, work with the livestock
producer and tackle the problems together.

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**Improving Reproductive Performance**

of the Three-Year-Old Beef Heifer

Ed Murray, D. V. M.
Spur, Texas

1. Weaning weight — 650 lb. - weaning wt. = lbs.
till breeding. Lbs. till breeding ÷ days till
breeding = lb. per day gain.
2. Keep all heifers for replacements.
3. Provide adequate numbers of tested bulls.
4. Breed for only 20 to 30 days.
5. Pregnancy check all heifers 45 to 60 days after
breeding season is over.
   a. Tax advantage
   b. Conception rates
1. Hereford 45-55%
2. Hereford X Angus 65-70%
3. Hereford X Angus X S.H. 75 to 80%.
6. At least 100 lb. gain last trimester.
7. Breed to calve 60 days earlier than cows.
8. Calve under confinement conditions.
   a. Control nutrition
   b. Assistance at any time
   c. Cleanliness
   d. Medication