

Beef CHAMPS

Beef Cattle Health and Management Production Strategies

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Pre-conditioning, Still a Good Option?

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In times of increasing costs and decreasing revenue, does spending more money to produce a calf really make sense? The answer is yes, if that increase in cost is more than offset by increased revenue. Pre-conditioning calves is not some new trend that is going to fade away. In reality, it is now more the norm than the exception. Study after study has shown the financial advantage to pre-conditioning calves.

A study from Colorado State that looked at 10 years of sales data from Superior Livestock Auctions video sales shows an average premium of \$4.37 per hundredweight for calves that were vaccinated and weaned for 45 days. Others show similar results; even data from the 2005 Arkansas Sale Barn survey shows a \$4.01 premium (Figure 1). That's \$22 extra for a 500-pound calf using the \$4.37 premium.

The hidden profit from pre-conditioning comes from post-weaning weight gain. If weaned calves gain 2 pounds per day during the 45-day pre-conditioning period, that's 90 extra pounds of calf that you have to sell.

For the last two years, the price discount associated with increasing weight has been very small compared to historical data. It was once

common to see a \$10 per hundred-weight price drop when moving from a 500- to a 600-pound calf. For the week ending on July 24, 2009, this discount was less than \$3. This should be

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encouraging producers to put more weight on their calves prior to selling them. So let's put some calculations to this and see how it comes out.

We will use a 500-pound weaned calf. The average selling price for that nonpre-conditioned calf was \$100.82 per hundredweight for the week ending July 24, making this calf worth \$504.10. If we pre-conditioned him for 45 days and he gained 90 pounds during this time, he now would weigh 590 pounds. The average selling price for a 600-pound steer was \$98.80 per

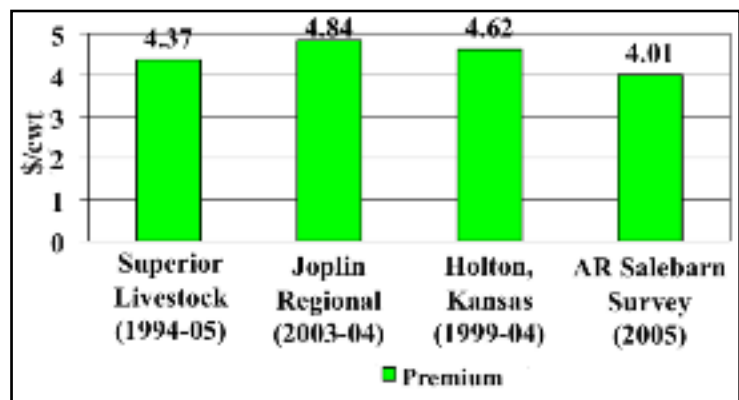


Figure 1. Price premiums at various markets for pre-conditioned calves.

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hundredweight, making our example calf worth \$582.92 or \$78.82 more than before. If we add a modest \$3 premium for his being pre-conditioned, that brings his market price to \$101.82 or \$600.62. This pre-conditioned calf is worth \$96.52 more than the freshly weaned calf.

There are expenses to pre-conditioning, so all this is not pure profit. I typically tell people

that the premium alone should pay for the costs; the profit comes from the increased weight. In these times, it is important to explore every opportunity to increase revenue. Additionally, it is important to follow an established pre-conditioning program. Buyers are looking for these calves, but are not as willing to pay any premium for cattle that do not have any documentation on what has been done to them. It

would also be beneficial to work with your normal market, and place your cattle in a special pre-conditioned sale as these tend to draw the greatest number of buyers who are looking for pre-conditioned cattle. Pre-conditioning your calves should strongly be considered for all beef producers. For more information on pre-conditioning, please contact your local county extension office.

Fly Control Has Been Challenging This Year

JEREMY POWELL, DVM, AND DR. C.A. TUCKER, LIVESTOCK ENTOMOLOGIST

Fly problems started early this year for cattle producers and have continued to be a challenge. Heavy fly infestations can cause stress to your cattle, leading to poor weight gains and decreased milk production. Flies can also spread disease-causing pathogens, leading to pinkeye or mastitis in cattle. Estimated losses from horn flies cost U.S. cattle producers nearly \$900 million each year. A USDA report indicated that heavy fly infestations in cows resulted in one-half pound of weight loss per day and a 20 percent drop in milk production. On-the-farm demonstrations conducted in Arkansas showed that beef cows treated with fly tags increased their calf weaning weights between 12 and 60 pounds per head compared to the non-tagged control groups. Cow-calf producers in Arkansas deal primarily with two different species of flies, horn flies and face flies.

Horn flies are the most important external parasite of pastured cattle. Both male and female horn flies are active blood feeders and can feed up to 20 times per day. They are generally found on the back and torso of infested cattle. Horn flies remain on cattle during the warmer months of the year, periodically biting their hosts and sucking blood. Infestations surpassing



Horn flies on host.

2,000 flies per animal can be achieved when left unchecked. Their typical life cycle ranges from 9 to 12 days. The females deposit eggs into fresh manure piles. Three larval stages and a pupae stage are completed in the manure pat. Adult flies emerge from the fecal pat and seek new hosts.

Producers should rotate from one chemical class to another each year, decreasing the likelihood of resistance development.

Face flies are non-blood sucking flies that feed on secretions of the eyes, nose and mouth. Face flies are known to transmit pinkeye bacteria (*Moraxella bovis*) to cattle. Their life cycle is approximately 12 to 20 days. Females lay approximately 20 eggs per batch in manure. Three larval stages are completed in the manure. The final

larval stage will migrate from the manure and develop into characteristic white pupae. Adult emergence follows. Face fly control by itself is probably most effective using dust bags or cattle rubs.

Currently, there are many chemical classes of insecticides available for use against external parasites. They include synthetic pyrethroids, organophosphates, endectocides, insect growth regulators, chlorinated hydrocarbons and carbamates. There are a number of useful application methods for these products such as sprays, pour-ons, spot-ons, dust bags, back rubbers, boluses, ear tags dips and injectables.

Horn flies can develop resistance to insecticide chemicals. Resistance may occur more readily when ear tags are used as the primary control method. This occurs due to the constant exposure of an ear tag chemical to flies throughout several months during the summer. Research has shown that resistance will occur when the same chemical class of insecticide is repeatedly used for two to three years on the same farm. Therefore, producers should rotate from one chemical class of insecticide to another each year, decreasing the likelihood of resistance development. Refer to the chart on page 3 to identify the products that you routinely use in your operation. Using this chart, you can select

Chemistry	Active Ingredient	Brand Name
Dustbag Insecticides		
OP	coumaphos	Co-Ral Dust
OP	tetrachlorvinphos	Rabon Dust
SP	zeta-cypermethrin + piperonyl butoxide	Python Dust
Note: Several different dusts can be hand-sprinkled on cattle. Do not use these in dust bags unless the label indicates you can do so.		
Back Rubber Insecticides		
OP	coumaphos	Co-Ral Fly and Tick Spray
OP	tetrachlorvinphos	Ravap EC
SP	permethrin	Permethrin II, Durvet Permethrin, Brute, Prozap X, Permethrin 10, Ectiban
Insecticide Ear Tags		
SP	permethrin	Atroban, Apollo, Ectiban, Ectrin, Ear Force, Expar Extra, GardStar Plus, New Z Permethrin, Permethrin
SP	cyfluthrin	Cutter Gold
SP	beta-cyfluthrin	CyLence Ultra
SP	zeta-cypermethrin	Python, ZetaGard
SP	zeta-cypermethrin + synergist	Python Magnum
SP	lambda-cyhalothrin	Saber Extra, Excalibur
OP	ethion	Commando
OP	coumaphos + diazinon	Co-Ral Plus
OP	fenthion	Cutter Blue
OP	pirimiphos methyl	Cominator, Rotator, Tomahawk
OP	diazinon (20%)	Optimizer, BovaGard, X-Terminator
OP	diazinon (40%)	Patriot, Cutter
OP	diazinon + chlorpyrifos	Warrior, Diaphos Rx
SP + OP	lambda-cyhalothrin + pirimiphos methyl	Double Barrel
SP + OP	permethrin + chlorpyrifos + synergist	Ear Force Ranger
SP + OP	permethrin + chlorpyrifos	Perma-Tect II
OC	endosulfan	Avenger
AV	abamectin	XP-820
Animal Spray Insecticide		
OP	coumaphos	Co-Ral
OP	tetrachlorvinphos	Rabon
OP	tetrachlorvinphos + dichlorvos	Ravap EC
SP	permethrin	Atroban, Expar, Permethrin II, Ectiban, GardStar, many others
Insecticide Pour-Ons		
SP	permethrin	Atroban, Expar, Permethrin II, Ectiban, GardStar, Brute, Ultra Boss, many others
SP	lambda-cyhalothrin	Saber
AV*	endectocides	Ivomec, Cydectin, Dectomax
Oral Larvicides (Feed Additives)		
IGR	diflubenzuron	Clarify Larvicide
IGR	methoprene	Altosid IGR
OP	tetrachlorvinphos	Rabon Oral Larvicide
Bolus Insecticides		
IGR	diflubenzuron	Vigilante

OP=organophosphate, SP=synthetic pyrethroid, OC=organochlorine, AV=ivermectin, IGR=insect growth regulator.

* Endectocides are used for internal and external parasite control. For optimal horn fly control over an extended period, use other methods and chemistries.

** Insecticide chart adapted from Montana State University publication #1000-509SA.

products from different chemical classes that would allow you to rotate to different classes each year.

There are a number of methods that can be utilized by Arkansas cattle producers to help delay the development of insecticide resistance and thereby prolong the effectiveness of chemical insecticide control. These include:

- Rotate chemical classes of insecticide on an annual

basis, and utilize a different application method from year to year.

- Delay applications of insecticide until an economic threshold of flies has been reached (200 flies/animal).
- Immediately discontinue use of a chemical insecticide when it fails to work, regardless of time of year. Then, utilize a different class of compound.

- If insecticide ear tags are used, remove them in early September and use an alternative class of insecticide and application method for the remainder of the fly season.
- Discontinue use of all insecticide at the end of the fly season.

For more information about this fly control for cattle, contact your county Extension office.



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