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## The economic and welfare challenge

*The marketing of food animals normally requires the obligated transport, handling and exposure of the livestock to situations that are unfamiliar and novel to them.*

These factors commonly activate a stress response which can lead to significant economic impacts including:

- Loss of live weight and carcass yield (shrink)
- Degraded meat quality including dark cutting (DFD)
- Degraded quality grade due to marbling loss
- Reduced tenderness due to dehydration
- Reduced growth performance (average daily gain)
- Challenges to an animal's immune system
- Degraded animal well being

Historically shrink or weight loss due to transport and handling was thought to consist of urine, digestive track moisture and fill only. The industry viewed shrink as a short term loss that would be easily restored with water. Research has proven that this is not the case. Shrink loss includes actual carcass and muscle component and hence affects both carcass yield and quality.

Stress has a number of physiological effects including the release of cortisol which primarily acts to provide energy to the animal through the breakdown of glycogen stores and other tissue. This is why to a large extent weight loss or shrink occurs.

*Managing handling and transport stress will reduce live weight and carcass loss. DeStress products are drug free and contain natural nutritional ingredients designed to reduce animal stress and the subsequent losses stress creates.*

DeStress products are unique feed supplements developed by Canadian researchers. DeStress products contains a blend of electrolytes, bypass amino acids and specific blood sugars designed to reduce live weight and carcass weight losses, as well as enable the animal to maintain a more normal physiological state when animals are transported and handled. DeStress products are designed to be highly palatable and easily fed.

### DeStress products come in two concentrated ready to use forms

- DeStress crumble is a product that is mixed with the normal ration
- DeStress tank mixable is a water soluble product for use in water troughs or tanks

## Feeding protocol\*\*

- DeStress products should be fed 12-24 hours prior to shipping or handling. Products can also be fed as a restorative agent post transport
- Each animal should receive 1 kg of product
- Fresh water must be available at all times during consumption of dry products and following the consumption of tank mixable product
- Weaned calves should be fed 1/3 kg each day for three days after weaning.
- To meet the needs of different management systems, combinations of products can be used

## The benefits

Three Site Packer Trial Post Transport Treatment

	Control (Water)	Nutritional Therapy	Change	
# Head	1137	990	----	
Hot Carcass Yield	61.38	62.03	0.65	
Quality Grade (% Choice)	58.6	68.1	9.5	
DFD %	3.95	1.0	2.95	P<0.01

Can. J. Anim. Sci. 2006.86:317

Held overnight (12 - 24 hours) prior to harvest

Average Weight Loss Pre Transport Treatment

	Control	Nutritional Therapy	Change
# Head	109	135	----
Carcass Yield Mean kg	278	289	11 kg

Steers, Heifers, Bulls. Amer. J.

Anim. Sci. 1997. 75: 258

***DeStress nutritional therapy is effective in counteracting transport and handling stress in many species of livestock***

***Slaughter Cattle:*** See an improvement in grade quality and a reduction in carcass loss.

***Show Cattle (and Bulls):*** New surroundings following transport can stress show cattle. Nutritional therapy helps to stabilize the animal's physiology

***Grass Cattle:*** DeStress products can be used with pasture raised cattle to reduce shrink

***Weaned Calves:*** Weaning and the subsequent transport, co-mingling and handling can be a major stressor for young calves. DeStress nutritional therapy products can help maintain production, growth and immune function

***Veal Calves:*** DeStress nutritional therapy products can help reduce the carcass weight loss and retain veal quality attributes in veal calves

***Bison & Elk:*** Pasture raised animals like bison and elk can benefit from DeStress nutritional therapy to reduce stress and weight loss when transported

***Reduce shrink  
and increase  
carcass weight  
in your livestock***

***DeStress  
Nutritional Technology***

4389 112 Ave SE  
Calgary, AB T2C 0J7

**800.561.2474**

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NUTRITIONAL TECHNOLOGY

