

Project Title: **Importance and Control of Purge in vacuum Packaged Value-Added Beef Products**

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Layman's Summary:

Two studies were conducted to evaluate packaging, boxing and storage on fluid (purge) losses in value-added beef cuts prone to purge loss. Purge losses during vacuum packaged storage were extremely high (>5%) for top rounds that had been denuded and split, regardless of packaging system, boxing conditions or storage times. Teres Major muscles that were denuded but with the surrounding connective tissue left intact had much less purge than top rounds. Fluid losses during retail display, thawing and cooking appeared to be related to the amount of fluid lost during vacuum packaged storage, i.e., less later in the chain if loss was high during vacuum packaged storage. This suggested that these cuts with excessive exposed lean will lose a certain amount of fluid in the chain, and the part of the chain where the loss occurs depends on handling conditions.

Consumers, both retail customers and food service managers, reacted very unfavorably to purge. Most survey participants found cuts with accumulated purge to be unacceptable.

The packages and storage treatments evaluated in these studies did not prevent excessive purge loss, particularly in the denuded, split top round. Additional studies need to be done to evaluate the carcass to carcass and muscle to muscle differences, and different packaging systems such as modified atmospheres. Perhaps the pressure applied to these lean cuts during vacuum packaging and storage was the cause of the high purge levels.

