

Legume-Finished Beef: Achieving Current Production with Greater Environmental, Economic and Social Sustainability

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06/01/2016

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Feeding cattle in feedlots is efficient, but problematic because feed yards produce concentrated ammonia emissions and animals are routinely treated with antibiotics and hormones that can contaminate the environment. We propose the use of multiple nutritive forages that contain bioactive natural plant products (e.g., tannins) at pasture to mitigate this problem. Our goal is to create a multidisciplinary, multi-state regional research and outreach team along with an advisory panel to collect data on animal production, environmental impact and perceived customer value of the proposed new system. This grant will allow taking the critical steps of developing a regional partnership and plan for a Coordinated Agricultural Project that integrates high-quality forages containing bioactive natural plant products into beef production; exploring consumer interest in the approach; and collecting critical

preliminary data on winter feeding beef cows and calves using the preserved proposed forages. The transformative new system proposed will eliminate grain feeding and reduce environmental impacts relative to feed yards while maintaining beef production levels and enhancing the quality of the product.