

Who can participate:

- Producers who raise grass fed beef:
 - ▶ Those producers whose farms are located on lands that have been stripmined or who are close to an active mine.
 - ▶ Those producers whose farms aren't located near stripmines.

What this research project has to offer you:

- The liver analysis and evaluation will provide you the production status of your beef herd.
- The forage and mineral analysis reports will provide you insight as to your nutritional status of your herd.
- Help define invaluable information concerning the differences of forages that have been grown on stripmined areas have on mineral and the nutrition value for grass fed beef herds.

What you will need to provide:

- Complete the Participant Information Questionnaire.
- Allow Penn State personnel to collect up to 10 liver samples from marketed cattle for mineral analysis.
- Allow Penn State personnel to collect pasture, forage and mineral samples for analysis.



<http://vetextension.psu.edu>



Penn State, Department of Veterinary Science Extension is offering a research opportunity for grass-fed beef herds.



Mineral Status and its Relationship to Stripmine Grazing

If you have more questions or are interested in participating in this project, contact:

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Producers who raise beef cattle are well aware of the challenges in meeting mineral requirements of the grazing animals. With the consumer's increased interest and demand for grass-fed beef, producers will need to place more emphasis on proper mineral nutrition. Unknowingly, mineral nutrition can be compromised by geographic conditions within the state of Pennsylvania. Much of the state has been stripmined in the past or is currently being stripmined. This can change the mineral content of forages being consumed, and alter mineral availability to maintain animal health and performance.

Project Overview:

This field research project will be conducted under the guidance of Dr. Robert Van Saun, Penn State Extension Veterinarian. Specifically, we are interested in comparing mineral status of grazing cattle when exposed to forages raised on reclaimed stripmine areas to cattle that graze in non-stripmine areas. Areas around stripmines potentially have high levels of minerals that can disturb normal metabolism in the ruminant animal. This may result in possibly subclinical disease states that can impair productive, reproductive, and health performance in cattle.

Objectives:

Overall objectives of the study are to survey mineral status of grazing animals and determine if grazing on reclaimed stripmines adversely affects animal mineral status. Animal mineral status will be assessed by liver mineral content from samples collected at slaughter or any young animals that had died on farm.

Mineral feeding programs and pasture mineral status will be evaluated as part of the project. Information generated from the study results will help provide further insight into proper mineral supplementation schemes for grass-fed beef cattle.

This preliminary project will run through June, 2008; however, further funding through NE SARE has been sought to support a longer term study.

Your Role:

We are asking for volunteers who have grass-fed beef cattle operations in Pennsylvania to take part in this initial project. To participate, your cattle will need to be raised on a grass-fed system throughout most of the year. We are looking for farms grazing on reclaimed stripmine areas as well as those that are not. A Penn State representative will visit your farm

throughout the project to collect pasture samples for analysis and gather information concerning your herd's mineral program and animal health. During the visits, a sample of the mineral mix you offer your cattle and the label from the bag will be collected. Lastly, we would like to follow five to ten cattle to slaughter to collect a small liver sample for mineral analysis.

Your Returns:

As a participating farm in this project, you will receive a copy of the pasture analyses and an interpretation of mineral status of your animals. We are looking for 10 to 20 herds for the initial study and additional herds for the continuing follow-up study should it be successfully funded. The follow-up project will run over the course of 2 - 3 years. A survey will study the health status of your herd and how this could possibly relate to mineral status of your animals.

