

## 2016 Northeast Pasture Consortium Stakeholder Pasture Priority needs

The following priority needs are in order of priority. Any research project undertaken will include a cost analysis of implementation for farmers.

1. Explore new alternatives i.e.. U-tube videos, for transfer of knowledge and information to increase adoption of research findings with the agriculture community such as farmer mentoring, case studies, and creative use of technology in promotional materials. Produce summaries that are accessible to Extension Education, non-profits, and health professionals. **Moved from 11**  
\*Getting information to producers is a top challenge.
2. Exploring and explaining the impacts of stream and streambank exclusion from livestock grazing riparian areas. This priority is an immediate need and is based on problems in the Chesapeake Bay Watershed, especially in Maryland. State regulations are out due to EPA's guidelines based on Total Maximum Daily Load (TMDL) that call for livestock exclusion from streams and other water bodies that lie within pastureland to reduce nitrogen, phosphorus, and sediment loads entering Bay waters. There is not a clear scientific-based answer as to the impacts of careful grazing management have on streambanks and water quality. Therefore, the regulations are not based on science but on perception. Further research is needed to support and extend existing research which at this point is not very extensive and sometimes lacking in methodology and execution. Some studies refer to some small streamside exercise lots (livestock primarily fed stored feed) as pastures just because some grass struggles to grow on them. Stock densities on them are clearly above what is sustainable pasture carrying capacity. Current and past research is being compiled in a literature review on the impacts of grazing riparian areas appropriate for eastern US pastures at University Park, PA.
3. Research problems with orchardgrass persistence. Persistence has become a problem in hayfields throughout the Mid-Atlantic with some stands lasting only one or two years before dying out. This is disconcerting enough, but if it extends to pasturelands, we will be losing a major, highly productive forage species for grazing as well. Several factors have been identified as possible causes for the loss of orchardgrass, but it is still inconclusive what the underlying cause is.
4. More focus is needed on parasite issues for pastured small ruminants, especially given climate change and possibly a longer, warmer grazing season. Since synthetic dewormers quickly lose their effectiveness due to overuse, we are interested in seeking out botanical dewormers, such as birdsfoot trefoil, with condensed tannins that are natural dewormers that can be grown in pastures. We are also interested in selecting and breeding small ruminants that have a natural resistance to intestinal worms (work underway at WVU).
5. Research in meat and dairy products has found that omega-3 fatty acids (FA's) are higher in these products when they come from pastured livestock, while omega-6 FA's are lowered. The ratio of omega-6 to omega-3, therefore, is lowered significantly and is considered by the medical community to be more healthful to the consumer. In the Northeast, livestock have to be overwintered on stored forages which do not confer the same fatty acid synthesis. **In addition, Are there levels of grain supplementation that would still achieve an increase in omega-3 FA and Congegated Linoleic Acids (CLA's)?** Currently, research is underway at UNH and ARS at University Park, PA, to overcome this problem with feeding small amounts of flaxseed to dairy cows in their winter feed ration. This looks promising. The Dairy and Functional Foods Research Unit at Wyndmoor, PA is studying FA composition in grass-fed cow's milk and seeing how it and biologically active compounds are affected by different milk processing techniques so as preserve these health-promoting components found in raw milk in processed milk.
6. Determine the environmental impacts and profitability of alternative supplemental feeding strategies for animals on high quality pastures. What is the effect of stock density as it pertains to soil

health and animal health? How do you manage energy in a high quality pasture? Are there alternatives to feeding supplements?

7. Evaluate and promote annual forage species, improved varieties, and new species combinations under grazing management and changing climatic and soil conditions with emphasis on extending the grazing season (mid-summer slump and both ends of the growing season).
8. How to improve grazing lands with low inputs (especially land with C+ slopes) and using silvopasture techniques on understocked (w/trees) hardwood forests. This is a primary concern, especially given losing moderate quality land to corn production and pushing even more marginal land into production for grazing
9. Quantify the economics of whole-farm systems including the effects of breed selection, livestock diversification, and grazing management on animals and pasture health to promote safe, healthy, and secure local community food systems.
10. Determine the management strategies and costs of transition or conversion from row crops, forest, and idle ground to productive and sustainable grazing lands and soils. **How do you start the soil biological community when transitioning from row crop, forests, and idle ground to grazing lands? Research old findings, disseminate and re-evaluate.**
11. Identify environmentally sound marketing opportunities in dairy and livestock pasture-based production systems (grass-fed products). Produce summaries that are accessible to Extension Education, non-profits, and health professionals.