

Omega-3 Fat, Vitamin Content Boosted In Pastured Poultry Eggs

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Our previous pasture plant research indicated that when compared at similar stages of maturity, legumes on average contained more omega-3 fat (linolenic acid) content than grasses. We were interested in whether plant species omega-3 fat content differences would affect pastured poultry hen egg fat content, and how omega-3 fat and vitamins A and E content of eggs of pastured hens (supplemented with commercial mash) would compare to hens fed only commercial mash.

Our objectives were to compare omega-3 fat content of pasture species (alfalfa, red and white clover, grass) foraged by hens; and compare

egg yolk omega-3 fat, vitamin A and E content of hens pastured on the three pasture species and supplemented with commercial mash, to the egg yolks of indoor caged hens fed commercial mash.

Three established stands of predominantly alfalfa, red and white clover, or mixed cool-season grasses (orchardgrass, smooth brome, quackgrass, tall fescue, Kentucky bluegrass) were foraged by three groups of brown egg pullets (25 hens per group, less than 17 weeks of age) for three two-week periods in July and August 2002 in State College. After each two-week period, hen groups were rotated to a different pasture species. Pastures were maintained at early- to mid-vegetative stages of development throughout the six-week trial. Pastured hens received commercial mash, and calcium, water, and pasture ad li-

bitum. Concurrently, caged hens managed in a commercial facility were fed a mash diet and water ad libitum. Plucked samples of the three pastures were analyzed for fatty acid content. Egg yolks from the hens foraging the three pasture treatments and the caged treatment group were analyzed for omega-3 fatty acid, cholesterol, vitamin A and E content.

Results & Summary

Legume plant tissues had more omega-3 fat than grass; red and white clover had more omega-3 fat than alfalfa. Eggs of hens that foraged legume pastures had more omega-3 fat than hens that foraged on grass pastures. Omega-3 fat, vitamin A and E content were higher in eggs of hens that foraged pasture (& supplemented with commercial mash) than hens fed commercial mash only (pastured vs. caged eggs: 2.7 fold more omega-3 fat; 2.1 fold more vitamin E; and 41 percent greater vitamin A); cholesterol didn't differ among any treatments. Omega-3 fat and vitamin content increased with time on pasture, but didn't change over time in caged birds' eggs.

Maryland Pasture Walk Scheduled

Bus From Lancaster/Chester Area Available

A Pasture Walk is scheduled for Wednesday, April 23, from 10:30 a.m. until 1:30 p.m. at St. Brigid's Farm, Kennedyville, Maryland. Judy Gifford and Dr. Robert Fry will host the event.

St. Brigid's Farm is home to 158 registered Jersey cattle on just 55 acres. Management intensive grazing is the backbone of the operation with irrigation assisting the grasses and legumes to continue growth during the dry periods, supplying the high quality forages necessary to maintain the high levels of milk production. This will be the sixth year for the operation, all being seasonally based with the winter as the dry period.

Lunch will be available at the farm. Although there is no fee for lunch, advanced registration is required. Car/van pools will be leaving from Hagerstown and Frederick. For lunch reservations and

carpool information, contact the Washington County Extension Office at (301) 791-1304 or the Frederick County Extension Office at (301) 631-3576. The last van will leave the Frederick Extension Office at 8 a.m. and return at 4 pm.

The purpose of the pasture walk is to allow livestock producers a chance to learn more about the use of rotational grazing as a way to increase agricultural profitability. Time will be spent walking through the pastures discussing plant growth, fencing, watering systems, irrigation, and animal performance.

The farm is located at 12246 Locust Grove Road, Kennedyville.

For those in the Lancaster/Chester county area interested in traveling by bus to the pasture walk, call King's Agri-Seed's for reservations at (717) 687-6224.

SARE Calls For Grant Preproposals

BURLINGTON, Vt. — The Northeast Region Sustainable Agriculture Research and Education (SARE) program, which funds research and education grants and professional development grants, is calling for preproposals for the next SARE funding cycle. A preproposal is a brief, one-page summary of key project themes and results, and is part of the SARE selection process. Only those whose preproposal has been approved can go on to develop a full proposal.

This year, there is a specific interest in projects that address sustainable livestock production, dairy economic

viability and profitability, the sale of foods to local institutions, farm labor management, and the transition to a new farm enterprise. People with projects in these areas are particularly encouraged to apply.

Preproposal materials are available on the World Wide Web at www.uvm.edu. Follow the link to "grant and application information" and download the forms and instructions. Or, if you prefer printed materials, call or e-mail the Northeast SARE office at (802) 656-0471 and nesare@uvm.edu. Preproposals must be postmarked by May 16.

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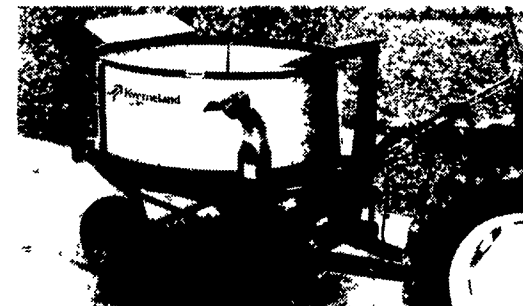


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