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Determination of Omega-3 Fatty Acid in Pastured Raised Meat Rabbits

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In society's push to become healthier, more and more people are concerned about where and how their food is raised. Farmers and growers are now being asked to evaluate the contents of what they grow and raise. Foods high in omega 3-fatty acids (alpha-linolenic acid) are being selected as choice dietary items. These have been shown to be higher in meat from animals that have been reared on pasture. We propose to show that meat rabbits raised on pasture vs. an in-house system are leaner, healthier, tastier and richer in important fatty acids and proteins essential for a good diet.

A trial was carried out in northeastern Maryland in the summer of 2002 using does housed in outdoor, movable pens, and housed in conventional, single deck, suspended, all wire cages inside a building. On April 1 the pregnant does that had been randomly selected to be on pasture were moved floorless pens on an established pasture overlaid with chicken wire to prevent the rabbits from digging out. After weaning, the fryers born in the indoor cages were randomly assigned to cages within the barn or to the outside pens. All fryers born in outdoor pens were randomly assigned to one of the outdoor pens. The litters were weighed at birth and at 21 days. The kits were then identified with ear tags and weighed individually on days 34, 42, 55, 82, and 104. At day 104, the rabbits were processed on the farm and carcass and fat weights recorded. Rabbits from each treatment group were randomly selected from which samples were collected for submission to Ralston Analytical Laboratories for determination of the fatty acid profiles. Additionally similarly sized rabbits were selected from each test pen for taste panel evaluation.

The highly significant increase in omega-3 fatty acids and the omega-3 to omega-6 ratio and the decrease in the fat content when rabbits were placed on pasture is an important finding in light of the fact that the omega-3 fatty acids are often deficient in human diets. The amount of feed used for those animals raised indoors was almost double that of those raised on pasture. The taste test concluded that the rabbits born and raised exclusively on pasture, and those finished on pasture were better tasting than those raised strictly indoors. There are some definite disadvantages to pasturing the rabbits including the need for covering the pasture with wire to prevent digging, the necessity for daily moving of the pens and the slower growth seen with the pastured animals. Having does kindle in the outdoor pens further increases the necessary work. As a result, it appears that rabbits born inside and raised outside may be optimal in terms of the labor involved and the positive effects on the meat produced.

We will continue to raise rabbits on pasture not only for the economical advantages but also for the added health benefits. Having animals out on pasture fits in with the overall attraction and sustainability of our farm.