National Extension Workshop

9 Introduction. R. D. Reynnells*1, 1US Department of Agriculture.

The Annual Extension Special Recognition Award acknowledges extra effort of Extension Personnel in national programs. The 2002 award is presented to Glenn Carpenter, currently with the USDA Natural Resources Conservation Service. Jim Rock (CT, retired) continues to provide the workshop evaluation. Publication of the Poultry Science Resource List is now through the Poultry Science Association. Please inform PSA Board of Directors if you appreciate this effort. The National Poultry Infolbase continues to languish due to insufficient enthusiasm by poultry system personnel. Faculty members, industry or government personnel must step forward at this time. See Nick Zimmermann (MD) for details.

Texas (John Carey, Chair) will host the 2004 Southern Region Poultry Extension Workshop, which now represents all Extension regions. Get program format, speaker or topic ideas to John. The 2002 National Poultry Waste Management Symposium will be held October 28-30 in Birmingham, AL. This is my last year as Coordinator. A transition team will transfer responsibilities to LGU personnel; with Mike Hulet, the 2004 Coordinator.

My responsibilities continue to change with the increasing importance of animal well-being and environmental issues. I am Co-Coordinator of the National Swine Housing and Well-Being Symposium, and education project. Department reviews, and liaison responsibilities to research committees, are important functions. Opportunities and change occur at an accelerating rate. We continue to develop and implement innovative programs based on relevance to animal agriculture and societal requirements. Anyone wishing to be part of program planning and development is welcome.

Key Words: Extension Recognition Award, PSA Resource List, National Poultry Infolbase, Poultry Extension Workshop, Waste Management Symposium

Environment & Management

Broiler Breeding

10 The impact of live yeast culture on the suppression of aflatoxicosis in broiler breeder hens. V.G. Stanley*3,1 M. Winsman1, T. Ogunleye1, C. Gray1, W.F. Krueger2, and A.E. Sefton3, 1Prairie View A&M University, 2Texas A&M University, 3Alltech, Guelph.

A study was conducted to examine the effect of live yeast culture [(LYC) (Yea-SaccTM Alltech, Inc., Nicholasville, KY)] on suppressing aflatoxicosis in broiler breeder hens. Ninety six Cobb broiler breeder hens, at 32 wk of age, of the same strain, were fed diets amended with aflatoxin (0 and 3 mg/kg) and LYC (0 and 2 lb/ton) singly and combined. The birds were housed at random, 12 females, 1 male per pen with two pens per treatment group. Eggs were collected daily, stored at room temperature and incubated every 7 days. Response variables analyzed were percent fertility, hatchability, hen day production, egg weight, chick weight at hatch, and embryonic mortality. The data showed that aflatoxin had no significant effect on percent fertility, egg size and chick weight at hatch. However, hen day egg production, percent hatchability, and embryonic mortality were significantly (P<0.05) affected by aflatoxin. The inclusion of LYC reversed the severity of aflatoxin, raising the level of hatchability and egg production to the level of the control. Egg production decreased significantly after wk 1 with the ingestion of aflatoxin. Hatchability of fertile eggs collected from the aflatoxin-fed hens for wk 1, 2, 3 were 87.5, 67.6 and 48.3%, respectively, compared to 72.2, 72.0, and 68% for the control. Egg production and hatchability of fertile eggs improved significantly (P<0.05) with the inclusion of LYC (89% vs. 82%) compared to 72.2, 70, 68% for the control. The effect of aflatoxin on hatchability was neutralized by LYC raising the level from 48.3% to 80% after wk 2 feeding with the toxin. In conclusion, the data demonstrate that aflatoxin has significant effect on hatchability of fertile eggs, and egg production which can be reversed by the dietary inclusion of the LYC.

Key Words: Broiler breeder, ALLZYME, Live yeast culture

11 The effect of dietary energy and enzyme supplementation on growth and dry matter retention in broiler breeders. M.S. Lilburn*1, C. Gr a y1, S. Ra o3, and E.E.M. Pierson3, 1The Ohio State University, 2 Tyson Foods, 3Finnfeeds International.

Commercial broiler breeders (Cobb) were fed one of three pellet grower diets from 14 d to 22 weeks with or without supplemental AVIZYME 1502 #. The experimental diets contained 1215, 1240, or 1275 kcal and the same feed restriction schedule was used for all treatments. Pullet weights were weighed by pen weekly and individually weighed at 4 wk intervals. Pullets fed the 1275 kcal diet were significantly heavier beginning at 8 wk and pullets fed the 1275 kcal diet plus AVIZYME were heavier at 12 wk resulting in a significant dietary energy X enzyme interaction. From 12 to 22 wk, the weekly feed allocation for pullets in the 1275 kcal plus enzyme treatment was marginally reduced compared with the other treatment combinations. This resulted in similar BW among all treatments at 22 wk but a 0.5 lb reduction in cumulative feed per pullet from 12 to 22 wk for those hens in the 1275 kcal plus enzyme treatment. At 20 wk, 8 pullets per pen and enzyme combination were randomly assigned to 48 individual pens in a Petersime growing battery. Hens were still on alternate day feeding (160 g per bird) so after feeding, total excreta was collected for the ensuing 48 h. This was repeated 4 times. Dry matter retention was 70.6% for the two lowest energy treatments with or without enzyme and this increased to 72.4% for the 1275 kcal dietary treatment alone and 73.7% for the 1275 kcal diet plus AVIZYME. This supports the BW data and cumulative feed savings associated with the high energy plus supplemental enzyme treatment

Key Words: Broiler breeders, AVIZYME, Restriction

12 Influence of peak and post-peak feed allotments on broiler breeder egg production. R.J. Lien*, J.B. Hess, and W.D. Berry, Auburn University, Auburn, AL USA.

To determine effects on egg production, feed allotments of breeder hens were increased at different rates from photostimulation (PS) to peak production, so as to reach high and low peak feed allotments, and then decreased at similar rates. A total of 800 Cobb 500 strain hens were reared on a photoschedule of 8h L:16h D and then subjected to PS with 15h L:9h D from 21 to 65 wk. Daily allotments of a 16% CP, 2860 kcal ME/kg, and 3.0% Ca feed were provided to both treatments from 23 to 65 wk. Feed allotments of 96.7 g/hen/day provided during wk 21 were increased weekly to reach levels of either 164.3 (high) or 153.5 (low) g/hen/day, which were provided from 29 to 32 wk. From 32 to 34 wk, allotments were decreased to 155.3 and 146.6 g/hen/day in the high and low treatments, respectively. Allotments in both treatments were then decreased at a rate of 0.9 g/hen/day on a weekly basis to reach either 126.2 (high) or 117.6 (low) g/hen/day at 65 wk. Therefore, feed allotments were reduced by 23.2 and 23.4% from peak to termination in the high and low treatments, respectively. At 21 wk, mean BW of both treatments was 2.08 kg. At 25 wk BW still did not differ. At 30 and 65 wk, the BW of the high treatment were 0.11 and 0.19 kg greater than the low treatment. Uniformities did not differ at 21, 25 or 30 wk. Fat pad, ovary and oviduct weights were greater in the high treatment at 30 wk; however, breast weights, and body fat and CP percentages did not differ at this time. Age at onset of lay did not differ between treatments. Total production at 65 wk was 155 and 142 eggs/hen in the high and low treatments, respectively. From 25 to 55 and from 56 to 65 wk, egg production/hen did not differ between treatments. However, from 46 to 55 and from 56 to 65 wk, egg production/hen in the low treatment was reduced relative to the high treatment by approximately 3 and 6 eggs, respectively. Egg weights and specific gravities did not differ between treatments throughout the study. Greater feed allotments provided to breeder hens during the peak and post-peak production periods had relatively slight effects on BW but resulted in greater late cycle and total egg production in this study.

Key Words: Broiler breeder, Egg production, Peak feed allotments, Feeding program