

WHOLE HATCHERY WASTE MEAL AS ALTERNATIVE PROTEIN AND CALCIUM SOURCES IN BROILER DIETS

HARINA INTEGRAL DE RESIDUOS DE INCUBADORA, COMO FUENTE ALTERNATIVA DE PROTEÍNA Y CALCIO EN LA DIETA DE BROILERS

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ADDITIONAL KEYWORDS

Fish meal. Broiler carcass. Feed costs.

PALABRAS CLAVE ADICIONALES

Harina de pescado. Dietas de broilers. Costes.

SUMMARY

A study was conducted in which processed whole hatchery waste meal (WHWM) replaced fish meal (FM), protein for protein, in broiler diets at 0, 10, 20 and 30% levels. There were 45 birds per treatment and 15 birds per replicate. The feeding trial which lasted for 42 days, was carried out at the Poultry Unit, Agricultural Research Council, Glen. Chemical analysis of the two test ingredients indicated that WHWM had higher contents of ash (18.12%) and ether extract (23.94%). However, crude protein content of FM was 73.18% while that of WHWM was 42.26%. Calcium-phosphorus ratio was 16.6:1 for WHWM as against 1.5:1 in the FM. Broilers fed with diet 2 had highest values for feed intake (118.25 g/bird/day) and weight gain (50.16 g/bird/day) while those fed with diet 3 were superior in efficiency of feed utilization (2.31). Results obtained for carcass traits decreased with increase in the levels of WHWM in the diets. Broilers fed with control diet had highest mean values for eviscerated weight (2.20 kg) and dressing percentage (77.86%). Values recorded for abdominal fat and internal organs (liver, lungs, heart and gizzard) did not show any particular trend. Similarly there were slight variations in the results obtained for blood parameters. Cost of feed intake/bird decreased with increase in the levels of WHWM in the diets.

It can be concluded from the results of this study that 10% of FM can be replaced with WHWM in broiler diets without adverse effects on growth and carcass traits. This approach of turning waste

into a valuable product will provide alternative protein and calcium sources in broiler diets and solve the problem of hatching waste disposal in the hatchery industry.

RESUMEN

Se realizó un estudio en el que se sustituyó la proteína de harina de pescado (FM) por la proteína de residuos integrales de incubadora (WHWM) profesados en dietas de pollos a niveles del 0, 10, 20 y 30%. Se utilizaron 45 aves por tratamiento y 15 por repetición. El ensayo de alimentación que duró 42 días fue llevado a cabo en la Unidad de Avicultura del Agricultural Research Council, Glen. Los análisis químicos de los ingredientes utilizados indicaron que el WHWM contenía mayor cantidad de ceniza (18,12%) y de extracto éter (23,94%). Sin embargo el contenido de proteína bruta de FM fue de 73,18% mientras que el de WHWM fue de 42,26%. La relación calcio fósforo fue 16,6:1 y la de FM 1,5:1. Los pollos alimentados con la dieta 2 consumieron mayor cantidad de alimento (118,25 g/ave/día) y ganaron más peso (50,16 g/ave/día) mientras que los alimentados con la dieta 3 tuvieron mejor transformación de alimento (2,31). Los resultados obtenidos para las características de la canal fueron peores a medida que se aumentaba el nivel de WHWM. Las aves que consumieron la dieta control tuvieron mayores valores medios para peso eviscerado (2,20 kg) y rendimiento canal (77,86%). Los valores