Acta Scientific Veterinary Sciences (ISSN: 2582-3183)

Volume 3 Issue 6 June 2021

Short Communication

Use of Larva Meal as an Alternate Protein Source to Soya Bean and Fish Meal in Backyard Poultry in Low Income Areas of Country

Rana Umar Tayyab[1], Nasir Iqbal[2] and Hamza Jawad[3]*

[1]Faculty of Veterinary Sciences, Bahaudin Zakariya University, Multan, Punjab, Pakistan

[2]Department of Veterinary Surgery and Pet Sciences, University of Veterinary and Animal Sciences, Lahore, Punjab, Pakistan

[3]Faculty of Veterinary and Animal Sciences, The Islamia University of Bahawalpur, Punjab, Pakistan

***Corresponding Author:** Hamza Jawad, Faculty of Veterinary and Animal Sciences, The Islamia University of Bahawalpur, Punjab, Pakistan.

Received: April 29, 2021

Published: May 25, 2021

All areas of a country can never be same so as the residents at different localities. Backyard poultry is a source of edible protein source for the low-income area residents that they can earn by selling in the high demand areas of the country. Larva meal is a cheap and rich source of protein diet. It contains crude protein (CP) = 43% - 60%, unsaturated fatty acids = 27% - 75% and metabolizable energy (ME) = 24 MJ/kg DM. They also contain minerals like potassium, calcium, phosphorous, and zinc [1,2]. They are used in feeding poultry, fisheries, piglets and research is being done for its use in ruminants. Commonly black soldier fly and housefly larvae are used. Larva meal can replace soy bean meal and fish meal from 27 to 100% depending upon the specie of the animal [3,4]. They can be used as fresh and live in backyard poultry as well as killed and dried to be mixed with other feed.1kg of larva biomass can be produced from 2kg of substrate biomass [5]. Black Soldier Fly (BSF) larvae and Housefly larvae are commonly used. Housefly has lifecycle of 10 days as compared to that of Black Soldier Fly that has life cycle 45 days. Moreover, Black Soldier Fly is native to U.S.A, South and North America whereas Housefly is found everywhere. So, it is convenient to use Housefly to produce larva. The ideal temperature for larva production is 30° to 40°C and moisture content of air is 75%. Housefly larva can be best reared on substrates like poultry droppings, cow manure, rotten fruits and vegetables, animal offal. In this activity wheat bran and cotton seed cake were used [6,7]. Then larva is harvested either by floatation method or by screening method. Then larva can be killed by boiling or using NaCl and then dried in oven or sun. There is need to commercialize it and persuade investors to invest in larva production making it a productive industry that will help backyard poultry industry [8].

Bibliography

1. Cadewolu MA., *et al*. "Evaluation of an animal protein mixture as a replacement for fishmeal in practical diets for fingerlings of *Clarias gariepinus* (Burchell, 1822)". *The Israeli journal of aquaculture = Bamidgeh* 62 (2010): 237-244.

2. Adeyemo GO., *et al*. "Effects of feeding desert locust meal (*Schistocerca gregaria*) on performance and haematology of broilers". (2008).

3. Cadag MT., *et al*. "Production and evaluation of maggot meal from common housefly (*Musca domestica*) as animal feed". *Philippine Journal of Veterinary and Animal Sciences* 7 (1981): 40-41.

4. Calvert CC., *et al*. "Housefly pupae as food for poultry". *Journal of Economic Entomology* 62 (1969): 938-939

5. Cao JunMing., *et al*. "Effects of replacement of fish meal with housefly maggot meal on growth performance, antioxidant and nonspecific immune indexes of juvenile *Litopenaeus vannamei*". *Journal of Fish China* 36 (2012): 529-537.

6. Cao JunMing., *et al*. "Effects of replacement of fish meal with housefly maggot meal on digestive enzymes, transaminases activities and hepatopancreas histological structure of *Litopenaeus vannamei*". *South China Fisheries Science* 8 (2012):72-79.

7. Hwangbo J., *et al*. "Utilization of house fly-maggots, a feed supplement in the production of broiler chickens". *Journal of Environmental Biology* 30 (2009): 609-614.

8. Ido A., *et al*. "Positive effects of dietary housefly (*Musca domestica*) pupa for fish and mammal". Abstract book Conference Insects (2014).

Volume 3 Issue 6 June 2021