

RINGKASAN

PETRUS LEWIANUS NAHAK (21390003). Pemanfaatan Limbah Jeroan Ikan Cakalang sebagai Bahan Baku Pakan Ikan dengan Lama Pengeringan yang Berbeda. Pasar Tradisional Oesapa di Kelurahan Oesapa, Kecamatan Kelapa Lima, Kabupaten Kupang : Dr.Ir. Welma Pesulima, MP dan Yunaldi H. Teffu, S.Pi, M.Si sebagai pembimbing I dan II. Program Studi Teknologi Hasil Perikanan, Fakultas Perikanan dan Ilmu Kelautan, Universitas Kristen Artha Wacana Kupang.

Penelitian ini berjudul “Pemanfaatan Limbah Jeroan Ikan Cakalang sebagai Bahan Baku Pakan Ikan dengan Lama Pengeringan yang Berbeda”. Penelitian ini dilatar belakangi oleh tingginya jumlah limbah hasil perikanan, khususnya jeroan ikan cakalang, yang belum dimanfaatkan secara optimal. Jeroan ikan masih mengandung protein, lemak, mineral, dan komponen nutrisi lainnya sehingga berpotensi dimanfaatkan sebagai bahan baku pakan ikan. Pemanfaatan limbah tersebut diharapkan dapat mengurangi pencemaran lingkungan sekaligus meningkatkan nilai tambah hasil samping perikanan.

Penelitian ini bertujuan untuk menganalisis pengaruh lama pengeringan terhadap karakteristik kimia dan fisik pelet pakan ikan yang berbahan dasar limbah jeroan ikan cakalang, meliputi kadar air, kadar protein, kadar karbohidrat, diameter pelet, dan kestabilan pelet dalam air. Selain itu, penelitian ini bertujuan untuk mengevaluasi mutu pakan berdasarkan Standar Nasional Indonesia (SNI) serta menentukan lama pengeringan yang menghasilkan kualitas pelet terbaik.

Penelitian menggunakan metode eksperimen dengan Rancangan Acak Lengkap (RAL) yang terdiri atas tiga perlakuan lama pengeringan dan dua ulangan. Perlakuan yang digunakan adalah P1, yaitu pengeringan pada suhu 70°C selama 60 menit; P2, yaitu pengeringan pada suhu 70°C selama 120 menit; dan P3, yaitu pengeringan pada suhu 70°C selama 180 menit. Bahan yang digunakan terdiri atas 1 kg jeroan ikan cakalang, tepung tapioka 200 g, tepung maizena 200 g, dedak padi 200 g, dan air 500 ml. Jeroan terlebih dahulu dibersihkan, dikukus selama 20 menit, dihaluskan, kemudian dicampurkan dengan bahan tambahan, dicetak menjadi pelet, dan dikeringkan sesuai perlakuan.

Hasil penelitian menunjukkan bahwa lama pengeringan memberikan pengaruh nyata terhadap *kadar air, kadar protein, dan kestabilan pelet dalam air, sedangkan terhadap **kadar karbohidrat dan diameter pelet tidak memberikan pengaruh nyata*. Kadar air mengalami penurunan seiring bertambahnya waktu pengeringan, yaitu dari 14,63% pada P1 menjadi 13,80% pada P2 dan 12,74% pada P3. Perlakuan P3 menghasilkan kadar air paling rendah dibandingkan perlakuan lainnya.

Kadar karbohidrat pelet berkisar antara 86,10–86,31% dan tidak menunjukkan pengaruh nyata akibat perbedaan lama pengeringan. Nilai tersebut masih berada di atas batas maksimal yang digunakan dalam standar SNI penelitian, sehingga formulasi bahan pakan masih perlu diperbaiki, khususnya dengan memperhatikan penggunaan bahan sumber karbohidrat.

Secara keseluruhan, *Perlakuan P3 (pengeringan 180 menit pada suhu 70°C) merupakan perlakuan terbaik dibandingkan perlakuan lainnya berdasarkan kombinasi kadar air terendah, kadar protein tertinggi, dan kestabilan pelet dalam air tertinggi, tetapi belum memenuhi seluruh persyaratan mutu SNI yang digunakan *. Oleh karena itu, diperlukan penelitian lanjutan untuk mengoptimalkan waktu dan kondisi pengeringan serta memperbaiki komposisi bahan baku sehingga diperoleh pakan ikan dengan kandungan nutrisi dan karakteristik fisik yang lebih sesuai dengan standar mutu.

Kata Kunci : Jeroan ikan cakalang, limbah perikanan, pakan ikan, pelet, lama pengeringan.

SUMMARY

PETRUS LEWIANUS NAHAK (21390003). Utilization of Skipjack Tuna Viscera Waste as Raw Material for Fish Feed with Different Drying Durations. Oesapa Traditional Market, Oesapa Urban Village, Kelapa Lima District, Kupang Regency. Supervisors: Dr. Ir. Welma Pesulima, M.P. and Yunaldi H. Teffu, S.Pi., M.Si. Study Program of Fishery Products Technology, Faculty of Fisheries and Marine Sciences, Universitas Kristen Artha Wacana Kupang.

This study is entitled “Utilization of Skipjack Tuna Viscera Waste as a Raw Material for Fish Feed with Different Drying Times.” The study was motivated by the large amount of fishery waste, particularly skipjack tuna viscera, which has not been optimally utilized. Fish viscera still contain protein, fat, minerals, and other nutrients, making them a potential alternative raw material for fish feed. The utilization of this waste is expected to reduce environmental pollution while increasing the added value of fishery by-products.

The objectives of this study were to analyze the effect of different drying times on the chemical and physical characteristics of fish feed pellets made from skipjack tuna viscera waste, including moisture content, protein content, carbohydrate content, pellet diameter, and pellet stability in water. The study also aimed to evaluate the quality of the resulting fish feed based on the applicable Indonesian National Standard (SNI) and to determine the drying time that produced the best pellet quality.

The study employed an experimental method using a *Completely Randomized Design (CRD)* consisting of three drying-time treatments with two replications. The treatments were P1, drying at 70°C for 60 minutes; P2, drying at 70°C for 120 minutes; and P3, drying at 70°C for 180 minutes. The materials consisted of 1 kg of skipjack tuna viscera, 200 g of tapioca flour, 200 g of corn starch, 200 g of rice bran, and 500 ml of water. The viscera were first cleaned, steamed for 20 minutes, ground, mixed with the additional ingredients, formed into pellets, and dried according to the respective treatments.

The results showed that drying time had a significant effect on *moisture content, protein content, and pellet stability in water, while it had no significant effect on **carbohydrate content and pellet diameter*. Moisture content decreased as the drying time increased, from 14.63% in P1 to 13.80% in P2 and 12.74% in P3. Treatment P3 produced the lowest moisture content among the treatments.

The carbohydrate content of the pellets ranged from 86.10% to 86.31% and was not significantly affected by differences in drying time. These values were still above the maximum limit specified in the SNI standard used in this study, indicating that the feed formulation still needs improvement, particularly with regard to the proportion of carbohydrate-rich ingredients.

Overall, treatment P3 (drying at 70°C for 180 minutes) was the best treatment compared to the other treatments based on the combination of the lowest moisture content, the highest protein content, and the best pellet stability in water. However, it did not fully meet all quality requirements of the applicable SNI standards. Therefore, further research is needed to optimize drying time and conditions, as well as to improve raw material composition, so as to obtain fish feed with nutrient content and physical characteristics that better conform to established quality standards.

Keywords: skipjack tuna viscera, fishery waste, fish feed, pellets, drying time.