

Puput Tri Wahyudi. NPM. 220331100105. Perancangan Desain Kemasan Pelet Ikan Melalui Pendekatan *Kansei Engineering*. Di bawah Bimbingan **Cahyo Indarto, S.TP., M.P., Ph.D.**

ABSTRAK

Pelet ikan berbahan baku limbah organik merupakan salah satu alternatif pemanfaatan limbah menjadi produk bernilai tambah dalam mendukung penerapan ekonomi sirkular. Namun, penggunaan bahan baku limbah dapat menimbulkan persepsi negatif konsumen terkait kebersihan, keamanan, dan kualitas produk. Desain kemasan diperlukan tidak hanya sebagai pelindung produk, tetapi juga sebagai media komunikasi yang dapat membentuk persepsi positif konsumen. Penelitian ini bertujuan untuk mengidentifikasi elemen desain kemasan yang berkontribusi dalam membentuk persepsi emosional konsumen serta merumuskan rekomendasi desain kemasan pelet ikan berbahan baku limbah organik melalui pendekatan Kansei Engineering. Penelitian dilakukan menggunakan 25 sampel kemasan pelet ikan dan melibatkan 30 responden. Data persepsi diperoleh melalui kuesioner Semantic Differential, kemudian dianalisis menggunakan Principal Component Analysis (PCA) dan Quantification Theory Type I (QTT-1). Hasil PCA menunjukkan bahwa delapan komponen utama mampu menjelaskan 90,00% keragaman persepsi konsumen. Empat konsep utama yang digunakan dalam perancangan meliputi kemasan modern, elegan, unik, dan bernilai premium, menarik, mudah digunakan, dan ramah lingkungan, harmonis, fokus, khas, aman, dan ergonomis, serta kokoh dan dapat ditutup ulang. Hasil QTT-1 menunjukkan nilai R-Square masing-masing sebesar 0,7452, 0,7125, 0,5693, dan 0,7414 pada keempat konsep tersebut. Rekomendasi desain berupa kemasan standing pouch atau ziplock berbahan plastik tebal atau laminasi, dilengkapi zipper, menggunakan kombinasi warna putih atau krem dengan hijau dan biru serta aksen oranye atau kuning, label informasi lengkap, tipografi sans-serif, dan ilustrasi ikan serta pelet. Hasil validasi menunjukkan bahwa sebagian besar indikator memperoleh penilaian positif, dengan persentase kesesuaian tertinggi pada bentuk kemasan sebesar 100,00% dan sistem zipper, tipografi, serta kejelasan informasi masing-masing sebesar 90,00%. Dengan demikian, pendekatan Kansei Engineering yang didukung PCA dan QTT-1 dapat digunakan untuk menerjemahkan persepsi emosional konsumen menjadi rekomendasi elemen desain kemasan pelet ikan berbahan baku limbah organik.

Kata kunci: *Pelet ikan, kemasan, Kansei Engineering, Principal Component Analysis, Quantification Theory Type I, limbah organik.*

Puput Tri Wahyudi. NPM. 220331100105. *Fish Pellet Packaging Design Using The Kansei Engineering Approach.* Supervised by **Cahyo Indarto, S.TP., M.P., Ph.D.**

ABSTRACT

Fish pellets made from organic waste represent an alternative approach to converting waste into value-added products while supporting the implementation of a circular economy. However, the use of waste-based materials may generate negative consumer perceptions regarding product cleanliness, safety, and quality. Packaging design is therefore needed not only to protect the product but also to serve as a communication medium capable of shaping positive consumer perceptions. This study aimed to identify packaging design elements that contribute to consumers' emotional perceptions and to formulate packaging design recommendations for fish pellets made from organic waste using the Kansei Engineering approach. The study involved 25 fish pellet packaging samples and 30 respondents. Consumer perception data were collected using a Semantic Differential questionnaire and subsequently analyzed using Principal Component Analysis (PCA) and Quantification Theory Type I (QTT-1). The PCA results showed that eight principal components explained 90.00% of the total variance in consumer perceptions. Four main concepts were used as the basis for packaging design, namely modern, elegant, unique, and premium-valued packaging, attractive, easy-to-use, and environmentally friendly packaging, harmonious, focused, distinctive, safe, and ergonomic packaging, and sturdy and resealable packaging. The QTT-1 results showed R-Square values of 0.7452, 0.7125, 0.5693, and 0.7414 for the four concepts, respectively. The recommended packaging design consists of a standing pouch or ziplock package made of thick plastic or laminated material, equipped with a zipper, using a combination of white or cream with green and blue and orange or yellow accents, complete product information labels, sans-serif typography, and realistic fish and pellet illustrations. Validation results showed that most indicators received positive responses, with the highest conformity score obtained for the packaging shape at 100.00%, while the zipper system, typography, and information clarity each obtained 90.00%. Therefore, the Kansei Engineering approach supported by PCA and QTT-1 can be used to translate consumers' emotional perceptions into packaging design element recommendations for fish pellets made from organic waste.

Keywords: *Fish pellets, packaging design, Kansei Engineering, Principal Component Analysis, Quantification Theory Type I, organic waste.*