

PENGEMBANGAN DESAIN KEMASAN BUAH STROBERI (*Fragaria ananassa*) BEKU MENGGUNAKAN INTEGRASI *HOUSE OF QUALITY* (HOQ) DAN *VALUE ENGINEERING*

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INTISARI

Stroberi merupakan komoditas pertanian yang mudah rusak serta memiliki umur simpan pendek. Sifat ini menjadi dasar dalam pengaplikasian teknik pengawetan pasca panen, salah satunya yaitu pembekuan. Salah satu faktor penentu kualitas stroberi beku yaitu kemasan yang melindungi. Kemasan stroberi beku yang beredar saat ini hanya menggunakan kemasan primer, tidak variatif, dan tidak mencantumkan label. Suara kebutuhan konsumen serta perhitungan nilai perlu dilakukan pada proses pengembangan kemasan. Penelitian ini bertujuan untuk mengetahui atribut kebutuhan desain kemasan, menentukan spesifikasi rancangan desain kemasan, dan membuat prototipe kemasan yang baru untuk memenuhi kebutuhan konsumen.

Penelitian diawali dengan *Quality Function Deployment* (QFD) fase pertama berupa penentuan atribut kebutuhan konsumen berdasar hasil penyebaran kuesioner kepada konsumen. Selanjutnya menentukan atribut kebutuhan teknis berdasarkan wawancara dengan produsen. *Benchmarking* juga dilakukan dengan menyebarkan kuesioner kepada konsumen. Analisis ini dilakukan untuk menyusun *House of Quality* (HoQ). Penelitian dilanjutkan dengan *value engineering* dimulai dari penyusunan hierarki fungsi, desain kemasan, lalu penentuan kinerja dengan menyebarkan kuesioner kepada konsumen. Kemudian dilakukan analisis biaya, *value*, penentuan konsep terbaik, dan perhitungan harga jual serta *Break Even Point* (BEP). Penelitian diakhiri dengan pembuatan prototipe berdasarkan *value* tertinggi.

Hasil penelitian menunjukkan terdapat 13 atribut kebutuhan konsumen yang diterjemahkan kedalam 14 atribut kebutuhan teknis. Tiga prioritas atribut kebutuhan yaitu terdapat deskripsi produk dalam bentuk kalimat, kombinasi warna label dan kemasan, dan kelengkapan informasi pada label. Spesifikasi rancangan desain yakni kemasan primer multilayer *nylon* dengan LLDPE dengan ketebalan 75 mikron berbentuk *pillow bag*, panjang 27 cm serta lebar 15 cm, penerapan metode vakum pada kemasan primer, kemasan sekunder multilayer *nylon* dan LLDPE dengan ketebalan 100 mikron berbentuk *standing pouch*, panjang 16 cm, lebar 6 cm, dan tinggi 25 cm, massa penyajian 500 g, bagian transparan berbentuk persegi, segel menggunakan *resealable zip lock* dengan fitur *notch*, desain terdiri atas 3 warna (merah, putih, hijau), jenis huruf Berkshire swash ukuran 50 dan Alice ukuran 15, terdiri atas 2 kalimat deskripsi produk, desain sederhana, dan penulisan informasi pada label sesuai dengan UU No. 18 Tahun 2012. Gambar prototipe dicantumkan dalam pembahasan.

Kata kunci : kemasan stroberi beku, *house of quality*, *value engineering*

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THE DEVELOPMENT OF FROZEN STRAWBERRY (*Fragaria ananassa*) PACKAGING DESIGN USING INTEGRATION OF HOUSE OF QUALITY (HOQ) AND VALUE ENGINEERING

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ABSTRACT

Strawberry is a perishable agricultural commodity which has a short shelf life. These characteristics are being the basis for the application of post-harvest preservation technique, one of which is freezing. One factor that determines the quality of frozen strawberry is the protective packaging. Frozen strawberry's current packaging only uses a primary packaging, the design is not various, and does not contain any label. The voice of customers and value calculations are needed to be carried out in the packaging development process. This study aims to determine the attributes of packaging design needs, determine the packaging design specifications, and create prototype of new packaging to meet customers' needs.

This research begins with the first phase of Quality Function Deployment (QFD) by determining the attributes of customers' needs based on the results of a questionnaire spread to customers. Then, ranking the priorities and targets of technical requirements which is obtained by interviewing the frozen strawberry producers. Benchmarking is also done by distributing a questionnaire to costumers. Furthermore, the next step is creating the House of Quality (HoQ). The research is continued with value engineering, starting with the preparation of the functional hierarchy, establishment of the design for packaging alternatives, and then determination of the packaging performance by distributing a questionnaire to costumers. Moreover, do the analysis of costs and values, determine the best concept, and calculate the selling price and Break Even Point (BEP). The research is ended with the creation of a prototype based on the highest value.

The results showed that 13 attributes of costumer needs are translated into 14 attributes of technical requirements. The three-ranked attribute priorities of customers' needs are product description in sentences, the rightness of color combination for the label and packaging, and the completeness of the information in the label. The design specifications are pillow bag primary packaging with the material of multilayer between nylon and LLDPE in 75 microns, 27 cm long and 15 cm wide, vacuum method to primary packaging, standing pouch secondary packaging with the material of multilayer nylon and LLDPE in 100 microns, 16 cm long, 6 cm wide, and 25 cm high, serving weight is 500 g, rectangular transparent window part, resealable zip lock with notch feature, the design consists of 3 colors (red, white, green), the font types are Berkshire swash size 50 and Alice size 15, the label consists of 2 sentences of product description, simple design, and the information written in label is in accordance with the Law no. 18 of 2012. Prototype pictures are shown in the discussion part.

Keywords : frozen strawberry packaging, house of quality, value engineering

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