

KELAYAKAN HIGIENE SANITASI DAN EKONOMI RUMAH POTONG HEWAN RUMINANSIA DI JAWA TENGAH SEBAGAI FASILITAS PUBLIK PENJAMIN KEAMANAN DAGING

Edy Dharma
20/466320/PKH/00728

Intisari

Rumah Potong Hewan (RPH) adalah suatu bangunan atau kompleks bangunan dengan desain dan syarat tertentu yang digunakan sebagai tempat memotong hewan bagi konsumsi masyarakat umum. Potensi RPH yang besar perlu ditingkatkan kualitasnya agar peran dalam menghasilkan pangan yang Aman Sehat Utuh dan Halal (ASUH) dan sebagai sumber pendapatan daerah dapat optimal. Penelitian ini bertujuan untuk mengidentifikasi kualitas higiene sanitasi RPH-R milik pemerintah kabupaten/kota di wilayah Provinsi Jawa Tengah, menganalisis kelayakan ekonomi RPH-R pemerintah sebagai unit pelayanan masyarakat, dan Mengukur tingkat kepuasan konsumen pengguna terhadap pelayanan di RPH-R pemerintah. Pengambilan sampel secara *purposive* pada RPH dari setiap kabupaten kota yang ditentukan berdasarkan skala prioritas pengembangan dan tingkat pemotongan yang besar yaitu sebanyak 33 RPH. Tingkat penerapan NKV diukur melalui pengamatan lapang dan pengisian kuisioner sesuai Permentan 11 Tahun 2020. Pengukuran tingkat cemaran mikroba dihitung dengan mengambil dan menguji 2 sampel daging dari tiap RPH. Tingkat kepatuhan RPH dalam pengolahan limbah dilihat dari pemenuhan dokumen lingkungan hidup. Kelayakan finansial melalui pembuatan cashflow dan pengukuran kelayakan usaha dengan metode *Net Present Value* (NPV), *Benefit Cost Ratio* (BCR) dan *Internal Rate of Return* (IRR) dengan asumsi siklus proyeksi investasi selama periode 5 tahun. Survei Kepuasan Masyarakat diukur melalui kuisioner kepada pengguna langsung RPH yaitu jagal dengan jumlah sampel 3 orang setiap RPH.

Hasil penilaian higiene sanitasi terhadap 33 RPH menunjukkan tujuh RPH memiliki kriteria NKV level 3, dan 26 RPH tidak memenuhi kriteria NKV. Rata-rata cemaran mikroba pada daging dari RPH-R prioritas pada uji TPC, *Staphylococcus aureus*, dan *E. coli* masing-masing adalah $1,57 \times 10^5$ CFU/g (4,93 log10), $0,76 \times 10^1$ CFU/g, dan $0,98 \times 10^1$ *Most Probable Number* (MPN)/g, dan dari 64 sampel daging, 1 sampel (1,6%) terdeteksi positif Salmonella. Hasil penilaian komprehensif antara kriteria NKV dan tingkat cemaran daging menunjukkan bahwa rata-rata sampel yang memenuhi Standar Nasional Indonesia di Rumah Potong Hewan (RPH-R) ruminansia dengan kriteria NKV lebih tinggi 85,71% dibandingkan Tanpa Kriteria. RPH-R (69,23%) dengan *Odd Ratio* sebesar

2,67. Hasil analisis kelayakan finansial dengan asumsi penerapan sertifikasi NKV dan pemenuhan kaidah lingkungan hidup menunjukkan seluruh skala RPH-R belum memenuhi kelayakan finansial nilai BCR pada RPH-R skala besar, menengah dan kecil berturut turut 0,56; 0,124 dan 0,07, nilai NPV sebesar – 1.469.308.077; -1.230.534.860; dan -733.151.610. Uji sensitivitas dengan memaksimalkan kapasitas dan memanfaatkan limbah dengan biogas menjadi energi listrik dan, pupuk serta menaikkan retribusi menjadi Rp.60.000,- per ekor menyebabkan seluruh skala RPH-R layak finansial. Penilaian Indeks Kepuasan Masyarakat menunjukan tingkat pelayanan masuk dalam kategori Baik dengan nilai 78,39. Secara keseluruhan tingkat penerapan higiene sanitasi di RPH-R prioritas di Jawa Tengah masih rendah, sedangkan pada kelayakan finansial diperlukan upaya supaya RPH-R tetap berlanjut melalui peningkatan pemotongan ternak, pemanfaatan limbah, serta peningkatan retribusi pemotongan ternak.

Kata Kunci: Kelayakan finansial, NKV, RPH, Tingkat Cemarkan Daging.

FEASIBILITY OF HYGIENE SANITATION AND THE ECONOMY OF ABATTOIR IN CENTRAL JAVA AS A PUBLIC FACILITY IN ENSURING MEAT SAFETY

Edy Dharma
20/466320/PKH/00728

Abstract

An abattoir (RPH) is a building or complex with certain designs and requirements used as a place to slaughter animals for public consumption. Enormous potential in providing quality food based on ASUH for public consumption. Large potential abattoir needs to be improved to maximize its role in producing meat safety and the source of regional income can be reached optimally. This study aims to examine the feasibility level of abattoirs owned and operated by government in Central Java based on Veterinary Control Number (NKV) level application, microbial contamination on meat produced, compliance with waste management, and socio-economic measurement through financial investment feasibility and community satisfaction index. Sampling was done using purposive sampling in every city or district based on priority scale of development and massive slaughtering. NKV level implementation was measured by field observations and questionnaires according to the Ministerial Decree of Minister of Agriculture no. 11 of 2020. Measurement of microbial contamination level was calculated by examining 2 meat samples in every abattoir based on different livestock and owners. Compliance level with waste treatment was measured by the completeness of environmental documents and reporting the condition of waste treatment. Financial Feasibility was measured by cash flow analysis and business feasibility using Net Present Value (NPV), Benefit Cost Ratio (BCR), and Internal Rate of Return (IRR) method with assumption 5 years production cycle. Public Satisfaction Survey was measured by direct user using a questionnaire given to butchers and communities who are involved in abattoir service, taking 3 samples in every abattoir.

The sanitation hygiene assessment of 33 abattoirs showed that seven had an NKV criteria level 3, and 26 did not meet the NKV criteria. The average TPC, *Staphylococcus aureus*, and *E. coli* in the meat were 1.57×10^5 CFU/g (4.93 log₁₀), 0.76×10^1 CFU/g, and 0.98×10^1 Most Probable Number (MPN)/g, respectively, and from 64 meat samples, 1 sample (1.6%) was detected positive with *Salmonella*. The results of a comprehensive assessment between the NKV criteria and the level of meat contamination showed that the average sample that met the Indonesian National Standard in the ruminant slaughterhouse (RPH-R) with NKV criteria was 85.71% higher than that of the No-Criteria RPH-R (69.23%). The odd ratio of 2.67. The results of the financial feasibility analysis assuming the application of NKV certification and compliance with environmental rules show that the entire scale of the RPH-R has not met the

financial feasibility of the BCR value in the large, medium and small scale RPH-R, respectively 0,56; 0,12 and 0,07, the NPV value is – 1.469.308.077; - 1.230.534.860; and -733.151.610. Sensitivity analysis by Maximizing capacity and Utilizing Waste with Biogas into Electric Energy Fertilizer and increasing the levy to IDR.60,000,- per head makes the entire scale of RPH-R financially feasible. While the analysis of customer index shows the level of service is in the Good category with a value of 78.39. Overall, the level of application of hygiene and sanitation in priority abattoirs in Central Java is still low, while in terms of financial feasibility, efforts are needed to ensure that the abattoir continues through increased slaughter of livestock, utilization of waste, and increased levies for slaughtering livestock.

Keywords: Abattoir, Financial Feasibility, Meat Contamination Level, Veterinary Control Number