ANALISIS RISIKO MUTU PADA RANTAI PASOK KOMODITAS SAYUR ORGANIK

INTISARI

Oleh:

Dionisius Marlon Ayofi

21/478725/TP/13195

Sayur organik segar merupakan komoditas pertanian yang diminati konsumen dengan pola hidup sehat. Penelitian ini bertujuan untuk mengidentifikasi risiko mutu rantai pasok, pengujian mutu fisik dan merumuskan strategi mitigasi risikonya. Responden dipilih dengan *purposive* dan *snowball sampling,* kemudian *in-depth interview* dilakukan dengan 36 *risk owner.* Penilaian risiko berdasarkan ISO31000:2018 tahapan identifikasi, analisis, dan evaluasi risiko, dan menggunakan metode FMEA. Alur rantai pasok sayur organik dipetakan dan 30 risiko teridentifikasi pada petani, kelompok tani, dan distributor. Uji parameter fisik sayur organik dilakukan pada tomat, wortel, serta kubis dengan berdasarkan SNI dan pengambilan sampel dilakukan dengan *stratified random sampling.* Pada pengujian warna, sampel diletakkan dalam *photostudio foldable-box* lampu LED6000K dan dipotret menggunakan kamera DSLR Nikon D3100 dengan pengaturan tetap. Hasil pengambilan gambar dianalisis warna RGB menggunakan *software* ImageJ. Hasil warna pada tomat petani nilai RGB sebesar 125±14 dan distributor sebesar 136±14. Untuk wortel petani sebesar 137±10 dan wortel distributor 134±11. Sementara untuk kubis petani 130±13 dan kubis distributor 128±5. Selain itu, pengujian tekstur sayur organik dilakukan menggunakan alat *fruit hardness tester* FHT200. Hasilnya pada tomat petani sebesar 8,71±2,02 N/m^2 dan tomat distributor 7,22±1,44 N/m^2. Sementara untuk wortel petani 78,72±14,09 N/m^2 dan wortel distributor 82,30±10,32 N/m^2. Usulan strategi mitigasi risiko pada *tier* petani yaitu rotasi tanam dibuat dengan penjadwalan yang baik dan memaksimalkan penggunaan pestisida nabati. Untuk *tier* distributor yaitu evaluasi petugas dibuat efektif, mengoptimalkan penggunaan *checklist* atau QC, dan mengecek alat serta ketersediaan label kemasan secara berkala. Integrasi analisis risiko dan pengujian mutu tidak hanya menjaga kualitas, tetapi juga memperkuat reputasi produk sayur organik di mata konsumen.

Kata kunci: manajemen risiko, mutu sayur organik, risiko mutu.

ANALYSIS OF RISK QUALITY IN SUPPLY CHAIN ORGANIC VEGETABLE COMMODITY

ABSTRACT

By:

Dionisius Marlon Ayofi

21/478725/TP/13195

Fresh organic vegetables are agricultural commodities that in demand by consumers with healthy lifestyle. This study aims to identify the risk quality in supply chain, conduct the physical test, and arrange the risk mitigations. Respondents were selected using purposive and snowball sampling, then in-depth interviews were conducted with 36 risk owners. Risk assessment is based on ISO 31000:2018, the stages of risk identification, analysis and evaluation, and FMEA method. The organic vegetable supply chain can be mapped and 30 risks were identified at the farmer, farmer group, and distribution. The physical parameters tests of organic vegetables were conducted on tomatoes, carrots, and cabbage based on SNI and sampling is carried out using stratified random sampling. In the color test, the sample was placed in a foldable-box photostudio with 6000K LED light and captured using a Nikon D3100 DSLR camera with the constant settings. The results of the image were analyzed for RGB color using ImageJ software. In farmer tomatoes the RGB value was 125±14 and the distributor was 136±14. For farmer carrots it was 137±10 and the distributor carrots 134±11. While for farmer cabbage it was 130±13 and distributor cabbage 128±5. Moreover, the texture of organic vegetables was also tested using the FHT200 fruit hardness tester. In farmer tomatoes it was 8.71±2.02 N/m^2 and distributor tomatoes 7.22±1.44 N/m^2. While for farmer carrots 78.72±14.09 N/m^2 and distributor carrots 82.30±10.32 N/m^2. Proposed risk mitigation strategies for the farmer tier are implementing crop rotations with proper scheduling and maximizing the use of botanical pesticides. For the distributor tier, effective staff evaluations, optimizing the use of checklists or quality control (QC), and regularly checking equipment and packaging label availability are all recommended. The integration of risk analysis and quality testing not only maintains the quality, but also strengthens the reputation of organic vegetable product in the consumer point of view.

Keywords: quality of organic vegetable, risk management, risk quality.