

## ABSTRAK

Perkembangan *urban farming* hidroponik selada sangat pesat di Provinsi Jawa Tengah. Penelitian ini bertujuan: (1) Menganalisis kinerja finansial *urban farming* hidroponik selada di Provinsi Jawa Tengah, (2) Menganalisis risiko produksi *urban farming* hidroponik selada dan strategi mengatasinya, (3) Menganalisis tingkat keberlanjutan *urban farming* hidroponik selada, (4) Menganalisis pengaruh kinerja finansial dan risiko produksi terhadap keberlanjutan *urban farming* hidroponik selada. Penelitian ini menggunakan metode deskriptif kuantitatif dan kualitatif. Lokasi penelitian di Kota Semarang dan Kota Solo. Responden diambil sensus sejumlah 71 petani *urban farming* hidroponik NFT komoditas selada. Analisis kinerja finansial menggunakan ROI, PP, NPV, BCR dan IRR. Analisis sensitivitas menggunakan skenario kenaikan biaya produksi, penurunan harga output dan gabungan keduanya. Analisis risiko produksi *urban farming* hidroponik menggunakan analisis KV, HOR Fase 1, HOR Fase 2 dan analisis strategi penanganan risiko produksi. Analisis keberlanjutan menggunakan metode *MDS-RAP-URFARM* menggunakan dimensi lingkungan, ekonomi, sosial, teknologi dan kelembagaan. Pengaruh kinerja finansial dan risiko produksi terhadap keberlanjutan dianalisis menggunakan analisis regresi linier berganda dengan Y (tingkat keberlanjutan), ROI ( $X_1$ ), KV ( $X_2$ ), pendidikan ( $X_3$ ), pengalaman bertani ( $X_4$ ), jenis kelamin ( $X_5$ ), dan jumlah tanaman ( $X_6$ ). Hasil penelitian menunjukkan usaha *urban farming* hidroponik selada di Provinsi Jawa Tengah layak dijalankan. Usaha tidak layak dijalankan jika terjadi skenario penurunan harga output 10% dan kenaikan biaya produksi 10% yang diikuti penurunan harga output 10%. Risiko produksi sebesar 9,71% (risiko sedang). Teridentifikasi 16 kejadian risiko, 14 sumber risiko, 4 sumber risiko utama berdasar HOR Fase 1 dan 7 strategi penanganan risiko produksi berdasar HOR Fase 2. *Urban farming* hidroponik selada di Provinsi Jawa Tengah cukup berkelanjutan (63,14%) dari indeks gabungan. Dimensi lingkungan cukup berkelanjutan (67,50%), dimensi ekonomi cukup berkelanjutan (74,70%), dimensi sosial cukup berkelanjutan (67,31%), dimensi teknologi cukup berkelanjutan (63,99%) dan dimensi kelembagaan kurang berkelanjutan (42,19%). Seluruh variabel independen signifikan terhadap keberlanjutan. Secara parsial, variabel ROI, KV, pendidikan dan jumlah tanaman signifikan terhadap tingkat keberlanjutan sedangkan pengalaman bertani dan jenis kelamin tidak signifikan terhadap tingkat keberlanjutan.

Kata kunci: *urban farming*, hidroponik, selada, kinerja finansial, risiko produksi, keberlanjutan, pengaruh.

## ABSTRACT

The development of hydroponic lettuce urban farming is very rapid in Central Java Province. This study aims to: (1) Analyze the financial performance of hydroponic lettuce urban farming in Central Java Province, (2) Analyze the production risks of hydroponic lettuce urban farming and strategies to overcome them, (3) Analyze the level of sustainability of hydroponic lettuce urban farming, and (4) Analyze the influence of financial performance and production risks on the sustainability of hydroponic lettuce urban farming. This research employs both quantitative and qualitative descriptive methods. The study was conducted in Semarang City and Solo City. Respondents were selected through a census of 71 hydroponic urban farmers using the NFT system with lettuce as the commodity. Financial performance was analyzed using ROI, PP, NPV, BCR, and IRR. Sensitivity analysis was conducted using scenarios of increased production costs, decreased output prices, and a combination of both. Production risk was analyzed using the Coefficient of Variation (KV), House of Risk (HOR) Phase 1, HOR Phase 2, and production risk management strategies. Sustainability was assessed using the MDS-RAP-URFARM method based on environmental, economic, social, technological, and institutional dimensions. The influence of financial performance and production risk on sustainability was analyzed using multiple linear regression with sustainability level as the dependent variable (Y), and ROI (X1), KV (X2), education (X3), farming experience (X4), gender (X5), and number of plants (X6) as independent variables. The results showed that hydroponic lettuce urban farming in Central Java Province is financially feasible. However, it becomes unfeasible under scenarios involving a 10% decrease in output prices and a 10% increase in production costs combined with a 10% drop in output prices. The production risk is 9.71% (moderate risk). The study identified 16 risk events, 14 risk sources, 4 main risk sources based on HOR Phase 1, and 7 risk management strategies based on HOR Phase 2. Hydroponic lettuce urban farming in Central Java Province is moderately sustainable (63.14%) according to the composite index. The environmental dimension is moderately sustainable (67.50%), the economic dimension is moderately sustainable (74.70%), the social dimension is moderately sustainable (67.31%), the technological dimension is moderately sustainable (63.99%), and the institutional dimension is less sustainable (42.19%). All independent variables significantly influence sustainability. Partially, ROI, KV, education, and number of the plants significantly affect the sustainability level, while farming experience and gender do not have a significant effect.

**Keywords:** urban farming, hydroponics, lettuce, financial performance, production risk, sustainability, influence.