INTISARI

Permasalahan peningkatan produksi dapat dilakukan melalui pengurangan kesenjangan hasil aktual dan hasil potensial. Tujuan penelitian ini adalah menentukan tingkat efisiensi teknis, alokatif, ekonomi dan lingkungan usahatani padi sawah irigasi, serta mengetahui karakteristik risiko masing-masing input usahatani, perilaku petani padi sawah terhadap risiko dan nilai *risk premium*. Penelitian ini menganalisis dua musim tanam menggunakan 100 sampel petani padi sawah irigasi di Kabupaten Rokan Hulu. Data dianalisis dengan menggunakan fungsi produksi dan fungsi biaya *Cobb Douglas stochastic frontier* untuk penentuan efisiensi teknis, alokatif dan ekonomi. Fungsi produksi translog *stochastic frontier* digunakan untuk menentukan nilai efisiensi lingkungan. Karakteristik risiko input, perilaku petani terhadap risiko dan risk premium ditentukan melalui fungsi produksi translog yang diestimasi dengan metode OLS. Hasil penelitian menunjukkan petani padi sawah irigasi di Kabupaten Rokan Hulu belum efisien baik secara teknis, alokatif, ekonomis dan lingkungan. Berdasarkan nilai rata-rata, efisiensi teknis bisa ditingkatkan sebesar 18%. Faktor teknis yang berpeluang menurunkan inefisiensi teknis adalah ketersediaan air irigasi. Pada tingkat input dan output normal maka petani dianjurkan mengurangi penggunaan 25% phosphor, 11% pestisida dan 43% pestisida dan phosphor. Benih, tenaga kerja dan pupuk bersifat meningkatkan risiko produksi. Sebaliknya, lahan dan pestisida bersifat menurunkan risiko produksi. Perilaku petani terhadap risiko adalah *risk avers*. Rata-rata nilai *risk premium* yang mau dibayarkan petani adalah Rp. 1.343,-. Nilai ini lebih kecil dari nilai rata-rata beban premi asuransi subsidi yang canangkan oleh pemerintah.

Kata kunci: efisiensi teknis, efisiensi alokatif, efisiensi lingkungan, risk avers, risk premium

ABSTRACT

The problem of increasing production can be overcome by reducing the gap between actual and potential yield. The purpose of this study is to determine the level of technical, allocative, economic and environmental efficiency irrigated rice farming, and to determine the risk characteristics of each farming input, the farmers' risk preference and the risk premium. This study analyzed two growing seasons using 100 samples of irrigated rice farmers in the Rokan Hulu Regency. Data were analyzed using the production and the cost function of Cobb Douglas stochastic frontier to determine technical, allocative and economic efficiency. The stochastic frontier translog production function is used to determine the value of environmental efficiency. The characteristics of input risk, farmers' risk preference and risk premium are determined through the translog production function estimated by the OLS method. The results showed that irrigated rice farmers in Rokan Hulu Regency were not yet efficient both technically, allocative, economically and environmentally. Based on the average value, technical efficiency can be increased by 18%. The technical factor which has the opportunity to reduce technical inefficiency is the availability of irrigation water. At normal input and output levels, farmers are encouraged to reduce the use of 25% phosphorus, 11% pesticides and 43% pesticides and phosphorus. Seeds, labor and fertilizer are risks-increasing. Conversely, land and pesticides are risk-decreasing. Farmers' risk preference is risk avers. The average value of the risk premium that farmers want to pay is Rp. 1,343,-. This value is smaller than the average value of the subsidy insurance premiums that have been proclaimed by the government.

Keywords: technical efficiency, allocative efficiency, environmental efficiency, risk-averse, the risk premium