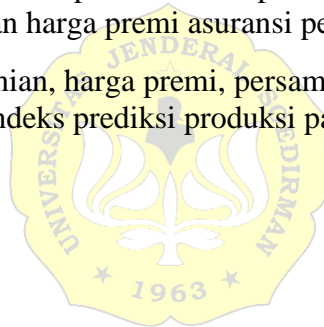


ABSTRAK

Sektor pertanian memiliki peran yang sangat penting dalam perekonomian serta pembangunan nasional. Namun, usaha pertanian memiliki risiko yang besar, termasuk ketika terjadi kegagalan panen. Kegagalan panen dapat disebabkan oleh berbagai hal, di antaranya curah hujan yang tidak sesuai dengan tanaman sehingga mengakibatkan menurunnya produksi padi. Salah satu upaya untuk melindungi petani dari risiko kegagalan panen adalah dengan adanya program asuransi pertanian. Penelitian ini bertujuan untuk menentukan harga premi asuransi pertanian berbasis indeks curah hujan dan berbasis indeks prediksi produksi padi untuk komoditas padi di Kabupaten Cilacap. Harga premi asuransi pertanian dihitung menggunakan persamaan Black-Scholes *cash-or-nothing* tipe Eropa, sedangkan prediksi produksi padi ditentukan menggunakan persamaan regresi linier metode kuadrat terkecil dan metode *improved simple averaging*. Hasil dari penelitian menunjukkan harga premi yang mendekati premi AOTP adalah harga premi saat persentil 4%, yaitu sebesar Rp189.636; Rp181.486; dan Rp175.382. Harga premi asuransi pertanian dari ketiga metode memberikan nilai yang tidak jauh berbeda. Penelitian ini memperoleh kesimpulan bahwa ketiga metode dapat digunakan untuk menentukan harga premi asuransi pertanian.

Kata kunci : asuransi pertanian, harga premi, persamaan Black-Scholes, indeks curah hujan, indeks prediksi produksi padi



ABSTRACT

The agricultural sector has a very important role in the economy and national development. However, agricultural business has a great risk, namely when there is a crop failure. Crop failure can be caused by various things, including rainfall that is not in accordance with the crop, resulting in decreased rice production. One of the solutions to protect farmers from the risk of crop failure is the existence of an agricultural insurance program. This study aims to determine the price of agricultural insurance premiums based on the rainfall index and based on the rice production prediction index for rice commodities in Cilacap Regency. The price of agricultural insurance premiums is calculated using the Black-Scholes cash-or-nothing equation of European type, while rice production predictions are determined using linear regression equations, least squares method and improved simple averaging method. The results of the study showed that the premium price that was close to the AOTP premium was the premium price at the 4% percentile, which was Rp189,636; Rp181,486; and Rp175,382. The price of agricultural insurance premiums from the three methods provides a value that is similar. This study concluded that all three methods can be used to determine the price of agricultural insurance premiums.

Keywords : *agricultural insurance, premium price, Black-Scholes equation, rainfall index, rice production prediction index*

