

## RINGKASAN

Nama : Anita Riski Indah Septianingrum, NIM 240361100005, Magister Pengelolaan Sumber Daya Alam, Program Pasca Sarjana, Universitas Trunojoyo Madura, 28 Januari 2026. Adopsi Teknologi Pengendalian Hama Terpadu (PHT) pada Tanaman Tembakau di Kabupaten Pamekasan; Komisi Pembimbing, Ketua : Dr. Ir. Slamet Subari, M.Si., Anggota : Dr. Teti Sugiarti, S.P., M.Si.

Komoditas tembakau merupakan salah satu komoditas strategis yang memberikan kontribusi penting bagi perekonomian nasional maupun daerah, terutama di Kabupaten Pamekasan yang dikenal sebagai salah satu wilayah sentra produksi tembakau. Namun demikian, sistem budidaya tembakau yang masih didominasi oleh penggunaan pestisida kimia sintetis berpotensi menimbulkan dampak negatif terhadap kelestarian lingkungan serta kesehatan petani. Pengendalian Hama Terpadu (PHT) hadir sebagai alternatif teknologi yang lebih berkelanjutan dan ramah lingkungan, tetapi tingkat penerapannya di kalangan petani tembakau di wilayah tersebut masih tergolong rendah. Oleh karena itu, penelitian ini bertujuan untuk mengidentifikasi berbagai hambatan yang dihadapi petani dalam penerapan Teknologi PHT (T-PHT) serta menganalisis faktor-faktor yang memengaruhi tingkat adopsinya pada budidaya tembakau.

Penelitian dilaksanakan di Kecamatan Pamekasan dan Kecamatan Tlanakan, Kabupaten Pamekasan, dengan jumlah responden sebanyak 50 orang petani sebagai responden. Data dikumpulkan melalui kombinasi metode kuesioner terstruktur, wawancara mendalam, dan observasi lapangan. Data yang diperoleh selanjutnya dianalisis menggunakan analisis deskriptif untuk mengkaji bentuk dan karakteristik hambatan adopsi T-PHT, serta analisis regresi linier berganda untuk menguji pengaruh variabel umur, tingkat pendidikan, pengalaman berusaha, luas lahan, dan kegiatan penyuluhan terhadap tingkat adopsi T-PHT.

Hasil penelitian menunjukkan bahwa hambatan penerapan T-PHT mencakup berbagai dimensi, yaitu hambatan teknis berupa kesulitan dalam mengenali musuh alami dan meracik pestisida nabati, hambatan ekonomi yang berkaitan dengan biaya pengadaan alat monitoring dan ketidakpastian hasil, hambatan sosial-budaya berupa kuatnya kepercayaan petani terhadap efektivitas pestisida kimia, hambatan kelembagaan akibat terbatasnya demplot serta akses pembelajaran, serta hambatan eksternal yang dipengaruhi oleh perubahan iklim dan fluktuasi harga tembakau. Secara simultan, hasil analisis regresi menunjukkan bahwa seluruh variabel independen berpengaruh signifikan terhadap adopsi T-PHT, yang ditunjukkan oleh nilai F-hitung sebesar 18,147 yang lebih besar dari F-tabel. Secara parsial, variabel umur, pengalaman berusaha, dan penyuluhan terbukti berpengaruh signifikan, sementara variabel pendidikan dan luas lahan tidak menunjukkan pengaruh yang signifikan. Variabel penyuluhan menjadi faktor yang paling dominan dalam mendorong adopsi T-PHT dengan koefisien regresi tertinggi

sebesar 1,795. Model regresi yang digunakan mampu menjelaskan sebesar 63,6% variasi tingkat adopsi T-PHT, sebagaimana ditunjukkan oleh nilai koefisien determinasi ( $R^2$ ) sebesar 0,636.

Kesimpulan penelitian ini adalah adopsi T-PHT pada budidaya tembakau di Kabupaten Pamekasan masih dihadapkan pada berbagai hambatan multidimensi. Keberhasilannya sangat dipengaruhi oleh karakteristik petani (umur dan pengalaman) dan terutama oleh kualitas serta intensitas penyuluhan. Oleh karena itu, disarankan agar pemerintah daerah dan dinas terkait meningkatkan program penyuluhan yang partisipatif, kontekstual, dan berkelanjutan, disertai dengan dukungan sarana prasarana serta insentif untuk mendorong adopsi praktik pertanian berkelanjutan.

**Kata Kunci:** Adopsi Teknologi, Pengendalian Hama Terpadu (PHT), Tembakau, Faktor Penghambat, Penyuluhan Pertanian, Kabupaten Pamekasan.

## SUMMARY

Name Anita Riski Indah Septianingrum, NIM 240361100005, Master of Natural Resources Management, Postgraduate Program, Trunojoyo University Madura, January 28, 2026. Adoption of Integrated Pest Control Technology (PHT) on Tobacco Plants in Pamekasan Regency; Supervisor: Dr. Ir. Slamet Subari, M.Si., Co-Supervisor: Dr. Teti Sugiarti, S.P., M.Si.

Tobacco commodities are one of the strategic commodities that make an important contribution to the national and regional economy, especially in Pamekasan Regency, which is known as one of the central areas of tobacco production. However, the tobacco cultivation system, which is still dominated by the use of synthetic chemical pesticides, has the potential to hurt environmental sustainability and farmers' health. Integrated Pest Control (PHT) is present as a more sustainable and environmentally friendly alternative technology, but the level of its implementation among tobacco farmers in the region is still relatively low. Therefore, this study aims to identify the various obstacles faced by farmers in the application of PHT Technology (T-PHT) and analyze the factors that affect the adoption rate in tobacco cultivation.

The research was carried out in Pamekasan and Tlanakan Districts, Pamekasan Regency, involving as many as 50 farmers as respondents. Data were collected through a combination of structured questionnaire methods, in-depth interviews, and field observations. The data obtained were then analyzed using descriptive analysis to examine the form and characteristics of barriers to T-PHT adoption, as well as multiple linear regression analysis to test the influence of age variables, education level, farming experience, land area, and extension activities on the rate of T-PHT adoption.

The results of the study show that obstacles to the implementation of T-PHT cover various dimensions, namely technical obstacles in the form of difficulties in recognizing natural enemies and concocting vegetable pesticides, economic obstacles related to the cost of procurement of monitoring tools and uncertainty of results, socio-cultural obstacles in the form of strong farmers' trust in the effectiveness of chemical pesticides, institutional obstacles due to limited demonstration plots and access to learning, and external obstacles influenced by climate change and fluctuations in tobacco prices. Simultaneously, the results of the regression analysis showed that all independent variables had a significant effect on the adoption of T-PHT, which was shown by the F-calculated value of 18.147, which was greater than the F-table. Partially, the variables of age, farming experience, and extension were shown to have a significant effect, while the variables of education and land area did not show a significant influence. The extension variable was the most dominant factor in encouraging the adoption of T-PHT, with the highest regression coefficient of 1.795. The regression model used

was able to explain the 63.6% variation in the T-PHT adoption rate, as shown by the value of the determination coefficient ( $R^2$ ) of 0.636.

This study concludes that the adoption of T-PHT in tobacco cultivation in Pamekasan Regency is still faced with various multidimensional obstacles. The success is greatly influenced by the characteristics of the farmer (age and experience) and especially by the quality and intensity of the extension. Therefore, it is recommended that local governments and related agencies improve participatory, contextual, and sustainable extension programs, accompanied by infrastructure support and incentives to encourage the adoption of sustainable agricultural practices.

**Keywords:** Technology Adoption, Integrated Pest Control (PHT), Tobacco, Inhibiting Factors, Agricultural Extension, Pamekasan Regency.