Penggunaan Klorantraniliprol oleh Petani Bawang Merah di Brebes dan Efikasinya terhadap Ulat Bawang
Merah (Spodoptera exigua HÃ¼bner)
Sandy Amarullah Amin, Prof. Ir. Y. Andi Trisyono, M.Sc., Ph.D.; Dr. Ir. Nugroho Susetya Putra, M.Si.
Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

DAFTAR PUSTAKA

Aldini, G.M., Trisyono, Y.A., Wijonarko, A., Witjaksono, & De Putter, H. (2020). Farmers' Practices in Using Insecticides to Control Spodoptera exigua Infesting Shallot (*Allium cepa* var. aggregatum) in the Shallot Production Centers of Java. Jurnal Perlindungan Tanaman Indonesia. 24(1), 75. https://doi.org/10.22146/jpti.47893

Allison, D.J., & Carde, T.R. (2007). Male pheromone blend preference function measured in choice and no-choice wind tunnel trials with almond moths (*Cadra cautella*). Anim. Behaviour 75: 259-266.

Badan Penelitian dan Pengembangan Pertanian. (2007). Feromon Exi Sukses Kendalikan Ulat Bawang Merah di Cirebon. Badan Penelitian dan Pengembangan Pertanian, Jakarta.

Badan Pusat Statistik. (2022). Luas Panen Tanaman Sayuran Menurut Kecamatan dan Jenis Tanaman di Kabupaten Brebes (ha), 2021 dan 2022. https://brebeskab.bps.go.id/id/statistics-table/. (diakses 02 Mei 2026).

Badan Pusat Statistik. (2024). Produksi Tanaman Sayuran & Buah-buahan Semusim Menurut Provinsi & Jenis Tanaman. https://www.bps.go.id/id/statistics-table. (diakses pada 10 Februari 2026).

Basuki, R.S.(2011).Farmers' Knowledge and Effectiveness of Insecticide Uses By Farmers In Controlling *Spodoptera exigua* on Shallots in Brebes and Cirebon.Indonesian Journal of Agriculture 4(1): 22-32.

Brown, A.W.A. (1958). Insecticide Resistance in Arthropods. WHO, Geneva. 240 p.

Carde, R.T. (1976). Utilization of Pheromones in the Population Management of Moth Pests. Environmental Health Perspectives 14: 133–144.

Cordova, D., Benner, E. A., Sacher, M. D., Rauh, J. J., Sopa, J. S., Lahm, G. P., Selby, T. P., Stevenson, T. M., Flexner, L., & Gutteridge, S. (2006). Anthranilic diamides: a new class of insecticides with a novel mode of action, ryanodine receptor activation. Pesticide Biochemistry and Physiology, *84*(3), 196–214.

Dasgupta, S. (2003). Bangladesh Pesticide Use 2003. The World Bank. Retrieved from https://doi.org/10.48529/8xjv-2f59

De Vito, A. J. (1995). Interpersonal communication. Book Harper Collins College Publishers. New York.

Dinter, A., Brugger, K. E., Frost, N.-M., & Woodward, M. D. (2010). Chlorantraniliprole (Rynaxypyr): A novel DuPontTM insecticide with low toxicity and low risk for honey bees

Penggunaan Klorantraniliprol oleh Petani Bawang Merah di Brebes dan Efikasinya terhadap Ulat Bawang
Merah (Spodoptera exigua HÃ¼bner)
Sandy Amarullah Amin, Prof. Ir. Y. Andi Trisyono, M.Sc., Ph.D.; Dr. Ir. Nugroho Susetya Putra, M.Si.
Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

(Apis mellifera) and bumble bees (Bombus terrestris) providing excellent tools for uses in integrated pest management. Julius-Kühn-Archiv, 423, 84.

Dinter, A. K., Brugger, N. F., & Woodward. (2008). Chlorantraniliprole (Rynaxypyr): A novel DuPont insecticide with low toxicity and low risk for honey bees (*Apis mellifera*) and bumble bees (*Bombus terrestris*), providing excellent tools for use in integrated pest management. 10th International Symposium of.

Eisenhardt, K.M., & Graebner, M.E. (2007). Theory Building from Chases: Opportunities and Challenges. The Academy of Management Journal, 50 (1), 25-32. http://www.jstor.org/stable/20159839

Fatirahma, F., & Kastono, D. (2020). Pengaruh Pupuk Organik Cair terhadap Hasil Bawang Merah (*Allium cepa* L. Aggregatum group) di Lahan Pasir. Vegetalika. 2020. 9(1): 305-315.

Febrianasari, R., Tarno, H., & Afandhi, A. (2014). Efektivitas Klorantraniliprol dan Flubendiamid pada Ulat Bawang Merah (*Spodoptera exigua* Hübner) (Lepidoptera: Noctuidae). HPT 2: 4.

Firmansyah, A. & Bhermana, A. (2019). The growth, production, and quality of shallot at Inland Quartz Sands (Quarzipsamments) in the off season. Ilmu Pertanian (Agricultural Science), 4(3): 110-116

Haryati, Y. & Nurawan, A. (2009). Peluang Pengembangan Feromon Seks dalam Pengendalian Hama Ulat Bawang (*Spodoptera exigua* Hübner) Pada Bawang Merah. Litbang Pertanian 28 (2): 72-77.

Indratin, Poniman, Sukarjo, & Helmi, M. (2021). Distribution of endosulfan insecticide residues on intensive shallot agriculture farming in Brebes Regency, Indonesia IOP Conf. Series: Earth and Environmental Science 648 (2021) 012080

IRAC. (2026). The IRAC Mode of Action Classification.https://www.irac-online.org/modes-of-action, diakses 26/05/2026

Kawai, T., Ohnishi, A., Fuji, G.M.T., Matsuoka, K., Kato, A., Matsumoto, S., & Ando, T. (2007). Identification of a unique pheromonotropic neuropeptide including double FXPRL motifs from a geometrid spesies, *Ascotis selenaria cretacea,* which produces an epoxialkenil sex pheromone. J. Insect Biochem. Mol. Biol. 37: 330-337.

Koster, W.G. (1990). Exploratory Survey on: Shallot in Rice-Based Cropping Systems in Brebes. Buletin Penelitian Hortikultura 18: 19–30.

Majumdar, A., & Reed, T. (2013). Pheromone Traps for Monitoring Insect Pests. Alabama Cooperative Extension System. www.aces.edu, diakses 20/05/2026.

Penggunaan Klorantraniliprol oleh Petani Bawang Merah di Brebes dan Efikasinya terhadap Ulat Bawang
Merah (Spodoptera exigua HÃ¼bner)
Sandy Amarullah Amin, Prof. Ir. Y. Andi Trisyono, M.Sc., Ph.D.; Dr. Ir. Nugroho Susetya Putra, M.Si.
Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

Marsadi, D., Suparta, I.W., & Sunari A.A.A.S. (2017). Invasion and Attack level of Beet Armyworm (*Spodoptera exigua* Hübner) on Two Cultivars of Onion in Songan Village, Kintamani, Regency of Bangli. E-Jurnal Agroekoteknologi Tropika. 6(4): 360–369.

Ministry of Agriculture (Kementerian Pertanian). 2026. Sistem Informasi Pestisida. http://pestisida.id/ simpes_app/rekap_kimia_formula.php., diakses 29/05/2026.

Moekasan, T.K. (1998). Status Resistensi Ulat Bawang, *Spodoptera exigua* Hubn. Strain Brebes terhadap Beberapa Jenis Insektisida. J.Hort. 7(4): 913-918.

Moekasan, T.K., Setiawati, W., Hasan, F., Runa, R., & Somantri, A. (2013). Penetapan Ambang Pengendalian *Spodoptera exigua* pada Tanaman Bawang Merah Menggunakan Feromonoid Seks. Jurnal Hortikultura 23: 80–90.

Morse, J.M., Barrett, M., Mayan, M., Olson, K., & Spiers, J. (2002). Verification Strategies for Establishing Reliability and Validity in Qualitative Research. International Journal of Qualitative Methods 1(2), 13–22. https://doi.org/10.1177/160940690200100202

Mottaleb, K. A. (2018). Perception and adoption of a new agricultural technology: Evidence from a developing country. Technology in society, 55: 126-135.

Mottaleb, K. A. 2018. Perception and adoption of a new agricultural technology: Evidence from a developing country. Technology in society, 55: 126-135.Behaviour 75: 259-266.

Pitojo, S. (2003). Benih Bawang Merah. Kanisius. Yogyakarta. 82 hal.

Rahmawati, D., & Handoko, H. (2011). Pengujian lapangan efikasi insektisida profenofos 500 g/L terhadap hama ulat grayak *Spodoptera exigua* Hübner. Pada tanaman bawang merah. Balai Pengkajian Teknologi Pertanian. Jawa Timur. Hlm 303-308.

Rakhmat, J. (1999). Psikologi komunikasi. Remaja Rosdakarya. Bandung.

Rauf, A. (1999). Population Dynamics of *Spodoptera exigua* Hübn. (Lepidoptera: Noctuidae) on Shallot Fields in the Lowlands. Buletin Hama dan Penyakit Tumbuhan 11: 39–47.

Robbins, S. P.(1999). Prinsip-prinsip Perilaku Organisasi Edisi ke-5. Erlangga. Jakarta.

Samadi, B., & Cahyono, B. (2005). Bawang Merah Intensifikasi Usaha Tani. Kanisius, Yogyakarta.

Sarwono, S. W. (2002). Psikologi Sosial: Individu dan Teori-Teori Psikologi Sosial. Balai Pustaka.

Setyobudi, L.O., Endarto, S., Wuryantini, dan Andayani, S. (1995). Status Resistensi Toxoptera citricidus terhadap Beberapa Jenis Insektisida. J.Hort. 5(1):30-34.

Sumadi. (2003). Intensifikasi Budidaya Bawang Merah. Kanisius. Yogyakarta.

Sunarjono, H. (2003). Bertanam 30 Jenis Sayur. Penebar Swadaya. Jakarta.

Teixeira, L.A., & Andaloro, G.T. (2012). Diamide insecticide: Global Efforts to Address Insect Resistance Stewardship Challenge. Pesticide Biochemistry and Physiology 106:76-78.

Penggunaan Klorantraniliprol oleh Petani Bawang Merah di Brebes dan Efikasinya terhadap Ulat Bawang
Merah (Spodoptera exigua HÃ¼bner)
Sandy Amarullah Amin, Prof. Ir. Y. Andi Trisyono, M.Sc., Ph.D.; Dr. Ir. Nugroho Susetya Putra, M.Si.
Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

Untung, K. (1996). Pengantar Pengelolaan Hama Terpadu. Gadjah Mada University Press. Yogyakarta. 273p.

Walgito, B. (2004). Pengantar Psikologi Umum. Andi Offset. Yogyakarta.

Wang. (2008). Genetic basis of sex pheromone blend difference between *Helicoverpa armigera* (Hubner) and *Helicoverpa assulta* (Guenee) (Lepidoptera: Noctuidae). J. Insect Physiol. 54: 813-817.

Wibowo, S. (2005). Budidaya Bawang Putih, Bawang Merah, Bawang Bombay. Penebar Swadaya. Jakarta. 194.

Witjaksono, Trisyono Y.A., Tanjung H.R., & Azzahra Z. (2024). Population dynamics and pheromone use for early monitoring of *Spodoptera exigua* Hübner (Lepidoptera: Noctuidae) in Indonesia. Journal of Tropical Plant Pests and Diseases, 24(1), 91–97. https://doi.org/10.23960/jhptt.12491-97

Yahya, H. (2004). Menjelajah Dunia Semut. PT Harun Yahya International.

Zanden, J.W.V. (1984). Social psychology. Third ed. Random House Inc. Ohio State Univ

Zhang, P., Gao, M., & Mu, W. (2014). Resistance level of *Spodoptera exigua* to eight various insecticides in Shandong, China. J. pestic. Sci. 39(1), 7-13 (2014).