

## DAFTAR PUSTAKA

- ADW. 2020. *Attacus atlas*. 2020. [https://animaldiversity.org/accounts/Attacus\\_atlas/classification/](https://animaldiversity.org/accounts/Attacus_atlas/classification/). Diakses pada 13 Februari pukul 14.00 WIB.
- Agarwal, A., S. Gupta., and R. K. Sharma. Role of oxidative stress in female reproduction. *Journal of Reproductive Biology & Endocrinology*, 3 (1) : 28-35.
- Ameliya, V. F. 2020. Efektivitas Ekstrak Kokon Sutera Liar (*Attacus atlas* Linnaeus, 1767) sebagai Ultraviolet Protektan Terhadap *Bacillus thuringiensis* Serotipe kurstaki Pengendali *Spodoptera litura* (Fabricius, 1775) di Laboratorium. *Skripsi*. Universitas Gadjah Mada : Yogyakarta.
- Arif, A. 2015. Pengaruh bahan kimia terhadap penggunaan pestisida lingkungan. *Jf Fik Unam* 3 (4): 134–143.
- Ariyadi, T, and Sinto Dewi. 2009. Pengaruh Sinar UltraViolet Terhadap Pertumbuhan Bakteri *Bacillus* sp. Sebagai Bakteri Kontaminan. *Jurnal Kesehatan* 2 (2): 20–25.
- Arlita, D. I., T. Hadiastono, M. M. Bedjo. 2014. Pengaruh suhu awal terhadap infektivitas *Spodoptera litura Nuclear Polyhedrosis Virus* (SINPV) JTM 97C untuk mengendalikan *Crociodolomia binotalis* Zell. (Lepidoptera : Pyralidae) pada tanaman kubis (*Brassica oleracea* var. capitata L.) *Jurnal HPT* 2 (3) : 28-35.
- Bandoly, M., and A. Steppuhn. 2016. Bioassays to investigate the effects of insect oviposition on a plant's resistance to herbivores. *Bio-Protocol* 6 (11) : 1-13.
- Bhawane, G. P, A. B. Mamlayya, and Y. Koli. 2011. Life History of *Attacus atlas* Linn. (Saturniidae: Lepidoptera) on *Sapium Insegne* Benth. From Western Ghats, Maharashtra. *The Bioscan* 6 (3): 497–500.
- Brambila, J. 2013. (*Lepidoptera : Noctuidae* ) and Some Native *Spodoptera Moths Introduction Part 1 : Terminology of Some Wing Characters*. Florida: University of Florida, Entomology and Nematology Department.
- Cahyonugroho, O. H. 2005. Pengaruh Intensitas Sinar Ultraviolet Dan Pengadukan Terhadap Reduksi Jumlah Bakteri *E.coli*. *Jurnal Ilmiah Teknik Lingkungan* 2 No. 1: 18–23.
- Capar, G., nad S.S. Aygun. 2015. Characterization of sericin protein recovered from silk wastewaters. *Türk Hijyen ve Deneysel Biyoloji Dergisi* 72 (3) : 219-234.
- Capinera, J.L. 2017. *Handbook of Vegetable Pests*. San Diego: Academic Press.
- Dai, H., G. Zhang, W. Zhang. 2017. Temperature dependent development

parameters and population life table of beet armyworm, *Spodoptera exigua* (Hübner) (Lepidoptera:Noctuidae). *Arthropods* 6 (4) : 117-125.

Dianawati, M., K. Kusyaeri, and W. Wahyudin. 2017. Pengendalian Hama Ulat Bawang (*Spodoptera exigua*) Pada Bawang Merah. Jabar Litbang. <http://jabar.litbang.pertanian.go.id/index.php/info-teknologi/611-pengendalian-hama-ulat-bawang>. Diakses pada 11 Februari 2020 pukul 13.00 WIB.

Dizdaroglu, M., and P. Jaruga. Mechanisms of free radical-induced damage to DNA. *Free Radical Research*, April 2012; 46(4): 382–419.

Emden, HF van. 2013. *Handbook of Agricultural Entomology*. USA: Wiley-Blackwell.

EPA. 2007. *Glossary for UV Database*. Office of Research and Development/National Exposure Research Laboratory/Human Exposure and Atmospheric Sciences Division. 2007. [https://ofmpub.epa.gov/sor\\_internet/registry/termreg/searchandretrieve/glossariesandkeywordlists/search.do?details=&vocabName=Glossary for UV Database](https://ofmpub.epa.gov/sor_internet/registry/termreg/searchandretrieve/glossariesandkeywordlists/search.do?details=&vocabName=Glossary+for+UV+Database). Diakses pada 13 Februari 2020 pukul 13.45 WIB.

EPA. 2020. *Final Report: Sequenced Combination of UV LED Wavelengths for Enhanced Inactivation of Waterborne Pathogens* [https://cfpub.epa.gov/ncer\\_abstracts/index.cfm/fuseaction/display.abstractDetail/abstract/10276/report/F](https://cfpub.epa.gov/ncer_abstracts/index.cfm/fuseaction/display.abstractDetail/abstract/10276/report/F). Diakses pada 7 Desember 2020 pukul 12.40 WIB.

Febrianasari, R., H. Tarno, and A. Afandhi. 2014. Efektivitas klorantraniliprol dan flubendiamid pada ulat bawang merah (*Spodoptera exigua* Hubner) (Lepidoptera: Noctuidae). *Jurnal Hama Penyakit Tanaman* 2: 103–109.

Fye, RE, and WC McAda. n.d. Laboratory Studies on the Development, Longevity, and Fecundity of Six Lepidopterous Pests of Cotton in Arizona *USDA Technical Bulletin*.

Gardi, L. 2018. Plank's Constant and the Nature of Light. *The OM Particle* 1 (1) : 1-9.

Georghious, G. P., and Saito. 2012. *Pest Resistance to Pesticides*. New York: Plenum Press.

Gomez, K. A, and A. A Gomez. 1984. *Statistical Procedures for Agricultural Research*. New York: John Wiley and Son.

Gullan, P. J., and P. S. Cranston. 2011. *The Insects : An Outline of Entomology*. Davis : John Wiley & Sons Publication. p. 432.

Hakeem., K. R., M. S. Akhtar, and S. N. A. Abdullah. 2016. Plant, Soil and Microbes. *Implications in Crop Science* : 1–366. <https://doi.org/10.1007/978-3-319-27455-3>.

- Harrison, ., and K. Hoover. 2012. Baculoviruses and Other Occluded Insect Viruses. In *Insect Pathology*, 73–131. Pennsylvania: Elsevier Inc. <https://doi.org/10.1016/B978-0-12-384984-7.00004-X>.
- Hastuti, D., A. Syailendra, N. I. Muztahidin. 2016. Patogenesitas *Spodoptera exigua* Nucleopolyhedrovirus untuk mengendalikan hama ulat grayak (*Spodoptera exigua* Hubn) di pertanaman bawang merah (*Allium Ascalonicum*) secara in vitro. *Jurnal Agroekoteknologi* 8 (2): 154–164.
- Hidayati, L., and T.R. Nuringtyas. 2016. Secondary metabolite profiling of four host plants leaves of wild silk moth *Attacus atlas* L. *Indonesian Journal of Biotechnology* 21 (2) : 117-124.
- Holme, DJ., dan Hazel, P. 1998. *Analytical biochemistry*. England.
- ICTV. 2020. *Taxonomy*. <https://talk.ictvonline.org/taxonomy/> Diakses pada 11 Agustus 2020 pukul 20.00 WIB.
- ITIS. 2020. *Spodoptera exigua* (Hübner, 1808) [https://www.itis.gov/servlet/SingleRpt/SingleRpt?search\\_topic=TSN&search\\_val ue=117471#null](https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_val ue=117471#null). Diakses pada 7 Februari 2020 pukul 20.00 WIB.
- Jehle, J. A., G. W. Blissard, B. C. Bonning, J. S. Cory, E. A. Herniou, G. F. Rohrmann, D. A. Theilmann, S. M. Thiem, and J. M. Vlæk. 2006. On the Classification and Nomenclature of Baculoviruses: A Proposal for Revision *Archives of Virology* 151 (7): 1257–1266.
- Kalshoven, L.G.E. 1981. *Pest of crop in Indonesia*. PT Ictiar Baru- Van Hoeve, Jakarta, Indonesia.
- Kowalski, W.J. 2009. *Ultraviolet Germicidal Irradiation Handbook*. Berlin : Springer pp. 20-21.
- Kumar, P., Kumar, D., Sikka, P., & Singh, P. 2015. Sericin supplementation improves semen freezability of buffalo bulls by minimizing oxidative stress during cryopreservation. *Animal Reproduction Science*, 152, 26-31. PMID:25497424. <http://dx.doi.org/10.1016/j.anireprosci.2014.11.015>
- Kumar, J.P, and B. B. Mandal. 2018. The inhibitory effect of silk sericin against ultraviolet-induced melanogenesis and its potential use in cosmeceutics as an anti-Hyperpigmentation compound, no. 10. <https://pubs.rsc.org/en/content/articlelanding/2019/pp/c9pp00059c#!divAbstr act>.
- Kumar J.P., S. Alam, A.K. Jain, K.M. Ansari, B.B. Mandal. 2018. Protective Activity of Silk Sericin against UV RadiationInduced Skin Damage by Downregulating Oxidative Stress. *Applied Bio Materials* : 1-51.
- Marsadi, D., I. W. Supartha, A.A.A.A. S. Sunari. 2017. Invasi dan tingkat serangan ulat bawang (*Spodoptera exigua* Hubner) pada dua kultivar tanaman bawang merah di Desa Songan, Kecamatan Kintamani, Kabupaten

Bangli. *E-Jurnal Agroekoteknologi Tropika* 6 (4): 360–69.

- Mehrkhou, F., A. A. Talebi, S. Moharramipour, V. H. Naveh, and S. Farahani. 2012. Development and fecundity of *Spodoptera exigua* (Hübner) (Lepidoptera: Noctuidae) on different soybean cultivars. *Archives of Phytopathology and Plant Protection* 45 (1): 90–98.
- Miguel G.A., C.A. Lopez. 2020. Extraction and antioxidant activity of sericin, a protein from silk. *Brazilian Journal of Food Technology* 23 : 1-14.
- Moekasan, T., and R. Basuki. 2007. Status resistensi *Spodoptera exigua* Hubn. pada tanaman bawang merah asal Kabupaten Cirebon, Brebes, dan Tegal terhadap insektisida yang umum digunakan petani di daerah tersebut. *Jurnal Hortikultura* 17 (4): 343–354.
- Mondal, M., K. Trivedy, and N. Kumar. 2007. The silk proteins, sericin and fibroin in silkworm, *Bombyx mori* Linn., - a Review. *Caspian Journal Env. Science* 5 (2): 63–76.
- Negara, A. 2005. Resistensi populasi hama bawang merah *Spodoptera exigua* (Lepidoptera: Noctuidae) terhadap klorfluazuron. *Jurnal Entomologi Indonesia* 2 (2): 1-10.
- Nong, H.Z. 2002. Effect of temperature and humidity on the development of *Spodoptera exigua* (Hubner). *Journal Huazhong Agricultural* 21 (4) : 352-355.
- Noviyanto, F. 2020. *Penetapan Kadar Ketoprofen dengan Metode Spektrofotometri UV-Vis*. Media Sains Indonesia : Bandung.
- Paital, B., S. K. Panda, A. K. Hati, B. Mohanty, M. K. Mohapatra, S. Kanungo, G. B. N. Chainy. 2016. Longevity of animals under reactive oxygen species stress and disease susceptibility due to global warming. *World Journal of Biological Chemistry* 7 (1): 110-127.
- Paparang, M., V. V Memah, J. B. Kaligis. 2016. Populasi dan persentase serangan larva *Spodoptera exigua* Hubner pada tanaman bawang daun dan bawang merah di Desa Ampreng Kecamatan Langowan Barat. *E-Journal Unstrat* 7 (7): 1–10.
- Putrasamedja, S., W. Setiawati, L. Lukman, and A. Hasyim. 2016. Penampilan beberapa klon bawang merah dan hubungannya dengan intensitas serangan organisme pengganggu tumbuhan. *Jurnal Hortikultura* 22 (4): 349-359.
- Rabindra, D. G., M. B. Jones, M. Parnell. 2002. The *Helicoverpa armigera* NPV Production Manual. <http://www.fao.org/docs/eims/upload/agrotech/2011/HaNPVmanual-pt1.pdf>. FAO. Diakses pada 11 November 2020 pukul 11.00 WIB.
- Rangi, A., and L. Jajpura. 2015. The Biopolymer Sericin: Extraction and Applications. *J. Textile Science and Engineering* 5 (1) : 1-5.

- Rastogi, R.P., A. Kumar, M.B. Tyagi, R.P. Sinha. 2010. Molecular mechanisms of ultraviolet radiation-induced DNA damage and repair. *Journal of Nucleic Acids* : 1-32.
- Rauf, A. 1999. Dinamika populasi *Spodoptera exigua* ( Hubner ) (Lepidoptera : Noctuidae) pada pertanaman bawang merah di dataran rendah. *Buletin Hama dan Penyakit Tumbuhan* 11 (2) : 39-47.
- Reddy, N., Y. Zhao, and Y. Yang. 2013. Structure and properties of cocoons and silk fibers produced by *Attacus atlas*. *Journal of Polymers and the Environment* 21 (1): 16–23.
- Rimadhani., A. Sartika, D. Bakti, and M. C. Tobing. 2013. Virulensi Nuclear Polyhedrosis Virus (NPV) terhadap ulat grayak (*Spodoptera litura* F.) (Lepidoptera: Noctuidae) pada tanaman tembakau. *Jurnal Online Agroekoteknologi* 1 (3): 768–82.
- Rohrmann, G. 2019. Baculovirus Molecular Biology 2:[https://www.ncbi.nlm.nih.gov/books/NBK543458/pdf/Bookshelf\\_NBK543458.pdf](https://www.ncbi.nlm.nih.gov/books/NBK543458/pdf/Bookshelf_NBK543458.pdf).
- Ross, S., M. Yooyad, N. Limpeanchob, S. Mahasaranon, N. Suphrom, G. M. Ross. 2017. Novel 3D porous semi IPN hydrogel scaffolds of silk sericin and poly (N-hydroxyethyl acrylamide) for dermal reconstruction. *Express Polymer Letters* 11 (9) : 719 - 730.
- Samsudin., T. Santoso, A. Rauf, Y.M. Kusumah. 2011. Keefektifan bahan pelindung alami dalam mempertahankan infektivitas *Spodoptera exigua* Nucleopolyhedrovirus (SeNPV). *Berita Biologi* 10 (6) : 689-697.
- Samsudin., and T. Santoso. 2014. Uji patologi *Spodoptera exigua* Nucleopolyhedrovirus (SeNPV) pada larva *Spodoptera exigua* Hubner (Lepidoptera: Noctuidae). *Jurnal Biologi Indonesia* 10 (2) : 169-178.
- Saridewi, M., M. Bahar, and A. Anisah. 2017. Uji efektivitas antibakteri perasan jus buah nanas (*Ananas comosus*) terhadap pertumbuhan isolat bakteri plak gigi di puskesmas Kecamatan Tanah Abang periode April 2017. *Biogenesis: Jurnal Ilmiah Biologi* 5 (2): 104–110.
- Senakoon, W., S. Nuchadomrong, S. Sirimungkararat, T. Senawong, P. Kitikoon. 2009. Antibacterial action of eri (*Samia ricini*) sericin against *Escherichia coli* and *Staphylococcus aureus*. *Asian Journal of Food and Agro-Industry* : 222-228.
- Shapiro, M., and J. Domex. 2002. Relative effects of ultraviolet and visible light on the activities of corn earworm and beet armyworm (Lepidoptera : Noctuidae) Nucleopolyhedroviruses. *Journal of Economic Entomology*, 95 (2) : 261-268.
- Shorey, H. H., and R.L. Hale. 1965. Mass-Rearing of the Larvae of Nine Noctuid Species on a Simple Artificial Medium. *Journal of Economic Entomology* 58

(3) : 522-524.

Silva, V.R., M. Ribani, M.L. Gimenes, A.P. Scheer. 2012. High molecular weight sericin obtained by high temperature and ultrafiltration process. *SciVerse ScienceDirect* 42 : 833-841.

Solihin, D. D., and A. M. Fuah. 2010. *Budidaya Ulat Sutera Alam Attacus atlas*. Bogor: Penebar Swadaya.

Sukirno, S., M. Tufail, K. G. Rasool, S. E. Salamouny, K. D. Sutanto, and A. S. Aldawood. 2018. The efficacy and persistence of *Spodoptera littoralis* Nucleopolyhedrovirus (SpliMNPV) applied in UV protectants against the beet armyworm, *Spodoptera exigua* (Hubner) (Lepidoptera: Noctuidae) under Saudi field conditions.” *Pakistan Journal of Zoology* 50 (5) : 1897-1902.

Suprobowati, O.D., I. Kurniati. 2018. *Virologi*. Pusat Pendidikan Sumber Daya Manusia Kesehatan Badan Pengembangan dan Pemberdayaan Sumber Daya Manusia Kesehatan. Kementerian Kesehatan Republik Indonesia : Jakarta. h. 95.

Triyati, E. 1985. Spektrofotometer Ultra-Violet Dan Sinar Tampak Serta Aplikasinya Dalam Oseanologi. *Oseana* 10 (1) : 39-47.

Vega, F. E., and H. K. Kaya. 2012. *Insect Pathology* Second Edition. San Diego: Elsevier Inc. p. 45.

Zaradina, S. 2016. Ekstraksi Serisin Kokon *Bombyx Mori* L. Sebagai Bahan Aktif Krim Penyembuh Luka *Skripsi*. Institut Pertanian Bogor : Bogor.