



DAFTAR PUSTAKA

- Abriyadi, H., A. Nikhlani & K. Sukart. 2017. Pemberian hormon fitoecdisteroid (Vitomolt) pada pakan alami terhadap sintasan larva rajungan (*Portunus pelagicus*) pada stadia zoea-megalopa. Jurnal Aquawarman, 3(2), 1–8.
- Aditya, B.P., Sunaryo & A. Djunaedi. 2012. Pemberian pelet dengan ukuran berbeda terhadap pertumbuhan kepiting bakau (*Scylla serrata* Forsskål, 1775). Journal of Marine Research, 1(1), 146–152.
- Ahmad, F., Y. Fujaya, D.D. Trijuno & S. Aslamyah. 2015. Acceleration of blue swimming crab *Portunus pelagicus* larvae development by phytoecdysteroid. Journal Aquaculture Indonesiana, 16, 50–55.
- Almuqaramah, T.M.H., M. Setiawati, N.B. Priyoutomo & I. Effendi. 2018. Pendederan udang vaname (*Litopenaeus vannamei*) dengan teknologi bioflok untuk meningkatkan pertumbuhan dan efisiensi pakan. Jurnal Ilmu Dan Teknologi Kelautan Tropis, 10(1), 143–152.
- Anggoro, D., R.S Rezki. & M.Z. Siswarni. 2015. Ekstraksi multi tahap kurkumin dari temulawak (*Curcuma xanthorrhiza Roxb*) menggunakan pelarut etanol. Jurnal Teknik Kimia USU, 4(2), 43.
- Aslamyah, S., Y. Fujaya, N. Rukminasari, A.A. Hidayani, M. Darwis & M. Achdiat. 2022. Utilization of feed and growth performance of mud crabs: The effect of herbal extracts as functional feed additives. The Israeli Journal of Aquaculture Bamidgeh, 74.
- Aziz, K.A. 1989. Dinamika populasi ikan. Bahan Pengajaran Departemen Pendidikan Dan Kebudayaan Direktorat Jenderal Pendidikan Tinggi Pusat Antara Universitas Ilmu Hayat. IPB. Bogor. 89hlm.
- Bachruddin, M., Sholichah, S. Istiqomah & A. Supriyanto. 2018. Effect of probiotic culture water on growth, mortality, and feed conversion ratio of vaname shrimp (*Litopenaeus vannamei Boone*). IOP Conference Series: Earth and Environmental Science, 137, 12036.
- Bakrim, A., A. Maria, F. Sayah, R. Lafont & N. Takvorian. 2008. Ecdysteroids in spinach (*Spinacia oleracea L.*): biosynthesis, transport and regulation of levels. Plant Physiology and Biochemistry, 46(10), 844–854.
- Banong, S. & M.R. Hakim. 2011. Pengaruh umur dan lama pemuasaan terhadap performans dan karakteristik karkas ayam pedaging. JITP, 1(2), 98–106.
- Basalmah, R.S. 2006. Optimalisasi kondisi ekstraksi kurkuminoid temulawak: waktu, suhu, dan nisbah.



Baylon, J.C. & A.N. Failaman. 1997. Larval rearing of the mud crab *Scylla serrata* in the Philippines. Aciar Proceedings, 141–146.

Buckmann, D. 1989. The significance of ecdysone in comparative physiology. Ecdysone from chemistry to mode of action, 20–26.

Cherbas, P. 1996. Molecular aspects of ecdysteroid hormone action. Metamorphosis: postembryonic reprogramming of gene expression in amphibian and insect cells, 175–221.

Chung, A.C.K., D.S. Durica, S.W. Clifton, B.A Roe & P.M. Hopkins. 1998. Cloning of crustacean ecdysteroid receptor and retinoid-X receptor gene homologs and elevation of retinoid-X receptor mRNA by retinoic acid. Molecular and Cellular Endocrinology, 139(1–2), 209–227.

Cruzsuarez., L. Elizabeth, M. Nietolopez, B. Guajardo, T.M. Salazar, U. Scholz & D. Marie. 2007. Replacement of fish meal with poultry by-product meal in practical diets for *Litopenaeus vannamei*, and digestibility of the tested ingredients and diets. Aquaculture, 272(1–4), 466–476.

Das, S. & D.S. Durica. 2013. Ecdysteroid receptor signaling disruption obstructs blastemal cell proliferation during limb regeneration in the fiddler crab, *Uca pugilator*. Molecular and Cellular Endocrinology, 365(2), 249–259.

Dermawaty, D.E. 2015. Potential extract curcuma (*Curcuma xanthorrhiza*, Roxb) as antibacterials. Jurnal Majority, 4(1).

Donaldson, E.M. 1979. Hormonal enhancement of growth. Fish Physiology, Vol. VIII. Bioenergetics and Growth, 455–597.

Feldman, G., & I. Jonathan. 2009. Phytoecdysteroids: understanding their anabolic activity. Rutgers The State University of New Jersey, School of Graduate Studies.

Fu, Y., X. Liu, L. Liu, W. Fang & C. Wang. 2022. Identification and functional analysis of the estradiol 17 β -dehydrogenase gene on the shell hardness of *Scylla paramamosain* during the molting cycle. Aquaculture, 738113.

Fujaya, Y. 2011. Growth and molting of mud crab administered by different doses of vitomolt. Jurnal Akuakultur Indonesia, 10(1), 24–28.

Fujaya, Y., S. Aslamyah, Letty & N. Alam. 2012. Budidaya dan bisnis kepiting lunak: stimulasi molting dengan ekstrak bayam. Firstbox Media.

Fujaya, Y., E. Suryati & E. Nurcahyono. 2008. Titer ekdisteroid hemolimph dan ciri morfologi rajungan (*Porunus pelagicus*) selama fase molting dan reproduksi. Torani., 18(3), 266–274.



Fujaya, Y., D.D. Trijuno, Haryati, Hasnidar, M. Rusdi, Usman & Zainal. 2018.

Efektivitas ekstrak daun murbei dalam menstimulasi peningkatan kandungan ecdisteroid hemolymph dan molting kepiting bakau (*Scylla olivacea*). *Torani Journal of Fisheries and Marine Science*, 2(1), 32–43.

Fujaya, Y. 2008. Kepiting komersil di dunia, biologi, pemanfaatan, dan pengelolaannya. Citra Emulsi. Makassar.

Fujaya, Y., S. Aslamyah & Z. Usman. 2011. Respon molting, pertumbuhan, dan mortalitas kepiting bakau (*Scylla olivacea*) yang disuplementasi vitomolt melalui injeksi dan pakan buatan. *Ilmu Kelautan: Indonesian Journal of Marine Sciences*, 16(4), 211–218.

Fujaya, Y. & Suryati. 2007. Pengembangan teknologi produksi rajungan (*Portunus pelagicus*) lunak hasil perbenihan dengan memanfaatkan ekstrak bayam (*Amaranthaceae*) sebagai stimulan molting. Lembaga Penelitian. Universitas Hasanuddin. Makassar, 20.

Fujaya, Y. & D.D. Trijuno. 2007. Haemolymphecdysteroid profile of mud crab during molt and reproductive cycles. *Torani*, 17(5), 415–421.

Fujaya, Y., D.D. Trijuno, S. Watanabe & A. Boediono. 2007. Development of Mud crab (*Scylla Olivaceous Herbst*) oocyte after in vitro culture with thoracic ganglion extracts of estuarine crabs (*Neoepisesarma Lafondi Jacquinot and Lucas*). *Biotropia-The Southeast Asian Journal of Tropical Biology*, 14(1), 24–31.

Fujaya, Y., A.A. Hidayani, D.K. Sari, S. Aslamyah, N. Rukminasari, A. Muthalib, S. Cristianto, E. Defista, H. Fazhan & K. Waiho. 2023. The optimal dosage of fermented herbal extract on growth and feed efficiency of Nile Tilapia (*Oreochromis niloticus*). *Tropical Life Sciences Research*, 34(2), 39–56.

Gong, J., K. Yu, L. Shu, H. Ye, S. Li & C. Zeng. 2015. Evaluating the effects of temperature, salinity, starvation and autotomy on molting success, molting interval and expression of *ecdysone receptor* in early juvenile mud crabs, *Scylla paramamosain*. *Journal of Experimental Marine Biology and Ecology*, 464, 11–17.

Gunamalai, V., R. Kirubagaran & T. Subramoniam. 2003. Sequestration of ecdysteroid hormone into the ovary of the mole crab, *Emerita asiatica* (Milne Edwards). *Current Science*, 493–496.

Habibi, M.W., D. Hariani & N. Kuswanti. 2013. Perbedaan lama waktu moulting kepiting bakau (*Scylla serrata*) jantan dengan metode mutilasi dan ablasi. *LenteraBio*.

Hartnoll, R.G. 1983. Strategies of crustacean growth. *Memoirs of the Australian Museum*, 18, 121–131.



Head, T.B., D.L. Mykles & L. Tomanek. 2019. Proteomic analysis of the crustacean molting gland (Y-organ) over the course of the molt cycle. Comparative Biochemistry and Physiology Part D: Genomics and Proteomics, 29, 193–210.

Herlinah, H., A. Tenriulo & E. Suryati. 2014. Hormon ecdysteron dari ekstrak daun murbei (*Morus spp.*). sebagai moulting stimulan pada kepiting bakau. Jurnal Riset Akuakultur, 9(3), 387–397.

Herlinah., R. Syah & A. Tenriulo. 2013. Efektifitas hormon ecdysterone dari ekstrak daun murbei dalam bentuk moist pellet untuk produksi kepiting bakau lunak. Laporan Akhir Pelaksanaan Insentif Riset SINas. Balai Penelitian dan Pengembangan Budidaya Air Payau

Hodge, R. 2009. The molecules of life: DNA, RNA, and proteins. Infobase publishing.

Houlihan, D., T. Boujard & M. Jobling. 2001. Food intake in fish—Blackwell Science Ltd. Oxford.

Hwang, J.K., J.S. Shim & Y.R. Pyun. 2000. Antibacterial activity of xanthorrhizol from *Curcuma xanthorrhiza* against oral pathogens. Fitoterapia, 71(3), 321–323.

Jayaprakasha, G.K., J.M. Rao & K.K. Sakariah. 2002. Improved HPLC method for the determination of kurkumin, demethoxykurkumin, and bisdemethoxykurkumin. Journal of Agricultural and Food Chemistry, 50(13), 3668–3672.

Karim, M.Y. 2005. Kinerja pertumbuhan kepiting bakau betina (*Scylla serrata Forsska*) pada berbagai salinitas media dan evaluasinya pada salinitas optimum dengan kadar protein pakan berbeda.

Karim, M.Y. 2007. Pengaruh osmotik pada berbagai tingkat salinitas media terhadap vitalitas kepiting bakau (*Scylla olivacea*) betina. J. Protein, 14(1), 65–72.

Karim, M.Y. 2013. Kepiting Bakau (*Scylla spp.*) Bioekologi, Budidaya dan Pemberihannya. Penerbit Yarsif Watampone, Jakarta.

Kim, S.Y., J.J. Gao & H.K. Kang. 2000. Two flavonoids from the leaves of *Mours alba* induce differentiation of the human promyelocytic leukemia (HL-60) cell line. Biological and Pharmaceutical Bulletin, 23(4), 451–455.

KKP. 2016. Pedoman Pemeriksaan/Identifikasi jenis ikan dilarang terbatas (*Scylla spp.*). Pusat Karantina Dan Keamanan Hayati Ikan. Badan Karantina Ikan, Pengendalian Mutu Dan Keamanan Hasil Perikanan. Jakarta (ID). KKP.

Kristina, N.N., R. Noveriza, S.F. Syahid & M. Rizal. 2007. Peluang peningkatan kadar kurkumin pada tanaman kunyit dan temulawak. Balai Penelitian Tanaman Obat Dan Aromatik. Hal, 1, 2–5.



Kuang, J., X. Yan, A.J. Genders, C. Granata & D.J. Bishop. 2018. An overview of technical considerations when using quantitative real-time PCR analysis of gene expression in human exercise research. *PLoS One*, 13(5), e0196438.

Kuballa, A. & A. Elizur. 2007. Novel molecular approach to study moulting in crustaceans. *Bulletin-Fisheries Research Agency Japan*, 20, 53.

Kuntinyo, Z.A. & T. Supratomo. 1994. Pedoman budidaya kepiting bakau (*Scylla serrata forskal*) di tambak. Direktorat Jenderal Perikanan. Balai Budidaya Air Payau. Jepara.

Lafont, R. & L. Dinan. 2003. Practical uses for ecdysteroids in mammals including humans: and update. *Journal of Insect Science*, 3(1), 7.

Liang, O.B., Y. Widjaja & S. Puspa. 1985. Beberapa aspek isolasi, identifikasi dan penggunaan komponen-komponen *Curcuma xanthorrhiza* ROXB dan *Curcuma domestica* VAL. Prosiding Seminar Nasional Temulawak. Universitas Padjadjaran. Bandung.

Lisnawati, L. & A. Ridwan. 2019. Potensi ekstrak bayam merah (*Amaranthus tricolor*) dalam mempersingkat durasi molting udang vannamei (*Litopenaeus vannamei*) dengan metode dipping. Bachelor Thesis. Institut Teknologi Bandung.

Livak, K.J. & T.D. Schmittgen. 2001. Analysis of relative gene expression data using real-time quantitative PCR and the 2⁻ ΔΔCT method. *Methods*, 25(4), 402–408.

Mallick, M., A. Bose & S. Mukhi. 2016. Comparative evaluation of the antioxidant activity of some commonly used spices. *International Journal of PharmTech Research*, 9(1), 1–8.

Mardiana, A., W. Mingkid & H. Sinjal. 2015. Kajian kelayakan dan pengembangan lahan budidaya kepiting bakau (*scylla spp*) di Desa Kabupaten Minahasa Utara. *Journal Budidaya Perairan*, 3(1), 1–11.

Mariyono, S.A. 2002. Teknik pencegahan dan pengobatan penyakit bercak merah pada ikan air tawar yang disebabkan oleh bakteri *Aeromonas hydrophila*. *Buletin Teknik Pertanian*, 7(1).

Masiyah, S. 2013. Aspek dinamika populasi kepiting bakau *Scylla serrata* (Forsskal, 1775) di perairan distrik merauke Kabupaten Merauke, Provinsi Papua. Agrikan: *Jurnal Agribisnis Perikanan*, 6, 39–46.

Meyer, J. R. 2007. Morphogenesis. Department of Entomology NC State University.

Monoarfa, S. & S.N. Hamzah. 2013. Analisis parameter dinamika populasi kepiting bakau (*Scylla serrata*) di Kecamatan Kwandang, Kabupaten Gorontalo Utara. *The NIKe Journal*, 1(1).



Moosa, M.K., I. Aswandy & A. Kasry. 1985. Kepiting bakau *Scylla serrata* (Forskal) dari perairan Indonesia. Lon-Lipi Jakarta, 18.

Mykles, D.L. 2001. Interactions between limb regeneration and molting in decapod crustaceans. *American Zoologist*, 41(3), 399–406.

Ngo, D.T., N.M. Wade, I. Pirozzi & B.D. Glencross. 2016. Effects of canola meal on growth, feed utilisation, plasma biochemistry, histology of digestive organs and hepatic gene expression of barramundi (Asian seabass; *Lates calcarifer*). *Aquaculture*, 464, 95–105.

Pais, R., R. Khushiramani & I. Karunasagar. 2008. Effect of immunostimulants on the haemolymph haemagglutinins of tiger shrimp *Penaeus monodon*. *Aquaculture Research*, 39(12), 1339–1345.

Pan, J., M. Liu, T. Chen, Y. Cheng & X. Wu. 2018. Immunolocalization and changes of 17beta-estradiol during ovarian development of Chinese mitten crab *Eriocheir Sinensis*. *Cell and Tissue Research*, 373(2), 509–520.

Power, L.W. & D.E. Bliss. 1983. Terrestrial adaptations. *The Biology of the Crustacea* (DE Bliss, Ed.), 8, 271–334.

Pratiwi, R. 2011. Biologi kepiting bakau (*Scylla spp.*) di Perairan Indonesia. Oseana, 36(1), 1–11.

Preston & Dinan. 2002. Phytoecdysteroid levels and distribution during development in *Limnanthes alba* Hartw. ex Benth. (*Limnanthaceae*). *Zeitschrift Für Naturforschung C*, 57(1–2), 144–152.

Prianto, E. 2007. Peran kepiting sebagai spesies kunci (*Keystone Species*) pada ekosistem mangrove. Prosiding Forum Perairan Umum Indonesia IV. Balai Riset Perikanan Perairan Umum. Banyuasin.

Ramdja, A.F., R.M.A. Aulia & P. Mulya. 2009. Ekstraksi kurkumin dari temulawak dengan menggunakan etanol. *Jurnal Teknik Kimia*, 16(3).

Sadinar, B., I. Samidjan & D. Rachmawati. 2013. Pengaruh perbedaan dosis pakan keong mas dan ikan rucah pada kepiting bakau (*Scylla paramamosain*) terhadap pertumbuhan dan kelulushidupan dengan sistem battery di tambak tugu, Semarang. *Journal of Aquaculture Management and Technology*, 84–93.

Sagala, L.S.S., M. Idris & M.N. Ibrahim. 2013. Perbandingan pertumbuhan kepiting bakau (*Scylla serrata*) jantan dan betina pada metode kurungan dasar. *Jurnal Mina Laut Indonesia*, 3(12), 46–54.

Sari, N.W., I. Lukistyowati & N. Aryani. 2012. Pengaruh pemberian temulawak (*Curcuma xanthorrhiza Roxb*) terhadap kelulushidupan ikan mas (*Cyprinus carpio L*) setelah di infeksi *Aeromonas hydrophila*. *Jurnal Perikanan Dan Kelautan*, 17(2).



Shelley, C. & A. Lovatelli. 2011. Mud crab aquaculture: a practical manual. FAO Fisheries and Aquaculture Technical Paper, 567, I.

Shen, H., X. Zhou, A. Bai, X. Ren & Y. Zhang. 2013. Ecdysone receptor gene from the freshwater prawn *macrobrachium nipponense*: identification of different splice variants and sexually dimorphic expression, fluctuation of expression in the molt cycle and effect of eyestalk ablation. General and Comparative Endocrinology, 193, 86–94.

Siahainenia, L. 2008. Bioteknologi kepiting bakau (*Scylla spp.*) di ekosistem mangrove Kabupaten Subang Jawa Barat.

Su, J., R. Zhang, J. Dong & C. Yang. 2011. Evaluation of internal control genes for qRT-PCR normalization in tissues and cell culture for antiviral studies of grass carp (*Ctenopharyngodon idella*). Fish & Shellfish Immunology, 30(3), 830–835.

Suganya, T., S. Senthilkumar, K. Deepa, J. Muralidharan, G. Gomathi & S. Gobiraju. 2016. Herbal feed additives in poultry.

Suharyanto, S. & S. Tahe. 2016. Pengaruh padat tebar terhadap pertumbuhan dan sintasan rajungan (*Portunus pelagicus*) di tambak. Jurnal Riset Akuakultur, 2(1), 19–25.

Suryono, C.A., I. Irwani & B. Rochaddi. 2016. Pertambahan biomassa Kepiting bakau *Scylla serrata* pada daerah mangrove dan tidak bermangrove. Jurnal Kelautan Tropis, 19(1), 76–80.

Susanti, H. 2009. Pengaruh dosis vitomolt dalam pakan kepiting bakau (*Scylla olivacea*) terhadap molting. Skripsi. Program Studi Budidaya Perairan.

Susanto & Murwani. 2006. Analisis secara ekologis tambak alih lahan pada kawasan potensial untuk habitat kepiting bakau (*Scylla sp.*).

Tahmid, M., A. Fahrudin & Y. Wardiatno. 2015. Habitat quality mud crab (*Scylla Serrata*) in mangrove ecosystem of bintan bay, Bintan District, Riau Islands. Jurnal Ilmu Dan Teknologi Kelautan Tropis, 7(2).

Tavares, C.P.S., U.A.T. Silva, L.A. Pereira & A. Ostrensky. 2018. Systems and techniques used in the culture of soft-shell swimming crabs. Reviews in Aquaculture, 10(4), 913–923.

Thomton, J.D., S.L. Tamone & S. Atkinson. 2006. Circulating ecdysteroid concentrations in Alaskan Dungeness crab (*Cancer magister*). Journal of Crustacean Biology, 26(2), 176–181.

Vandesompele, J., D. Preter, F. Pattyn, B. Poppe, N.V. Roy & F. Speleman. 2002. Accurate normalization of real-time quantitative RT-PCR data by geometric averaging of multiple internal control genes. Genome Biology, 3(7), 1–12.



Wahyuningsih, S.A. 2008. Pengaruh dosis penyuntikan vitomolt terhadap molting kepiting bakau (*Scylla olivaceous*). Skripsi. Fakultas Ilmu Kelautan Dan Perikanan Universitas Hasanuddin. Makassar, 31.

Warner, G.F. 1977. The biology of crabs elek science london. Paleontological Papers, 8, 2002.

Zainuddin, Z., Y. Fujaya, M.I. Djawad, S. Aslamyah, K. Nur & H. Hadijah. 2020. Effect of vitomolt supplements in feed on growth and survival rate of white shrimp (*Litopenaeus vannamei*) seeds. International Journal of Scientific and Research Publications.

Zawawi, M.R., A.N. Afiqah, Ikhwanuddin, Y. Sung, S. Tola, H. Fazhan & K. Waiho. 2021. Recent development in ecdysone receptor of crustaceans: current knowledge and future applications in crustacean aquaculture. Reviews in Aquaculture, 13(4), 1938–1957.

Zonneveld, N., E.A. Huisman & J.H. Boon. 1991. Prinsip-prinsip budidaya ikan. PT Gramedia Pustaka Utama.