



DAFTAR PUSTAKA

- Abdelaal, K.A., EL-Maghraby, L.M., Elansary, H., Hafez, Y.M., Ibrahim, E.I., El-Banna, M., El-Esawi, M., and Elkelish, A. 2020. Treatment of Sweet Pepper With Stress Tolerance-Inducing Compounds Alleviates Salinity Stress Oxidative Damage by Mediating The Physio-Biochemical Activities and Antioxidant Systems. *Agronomy* 10(26).
- Ahanger, M.A., Mir, R.A., Alyemeni, M.N., and Ahmad, P. 2020. Combined Effects of Brassinosteroid and Kinetin Mitigates Salinity Stress in Tomato through The Modulation of Antioxidant And Osmolyte Metabolism. *Plant Physiology and Biochemistry* 147: 31-42.
- Alvarenga, M.A., Papa, F.O., Landim-Alvarenga, F.C. and Medeiros, A.S.L. 2005. Amides as Cryoprotectants for Freezing Stallion Semen: A Review. *Animal Reproduction Science*. 89: 105-113.
- Amadi, J.O., Appah, O.R., Ibode, T.R., and Agbonavbare, O.R. 2018. Effect of Temperature and Duration of Storage on Viability of *Plukenetia Conophora* (Walnut) Mull Arg Seeds Using Tetrazolium Test. *International Journal of Research in Agricultural Sciences*, 5(2):2348-3997.
- Angelovici, R., Galili, G., Fernie, A.R., and Fait, A. 2010. Seed Desiccation: A Bridge Between Maturation and Germination. *Trends in Plant Science*, 15(4):211-8.
- Appanah, S. and Turnbull, J.M. 1998. A Review of Dipterocarpaceae: Taxonomy, Ecology and Silviculture. Center for International Forestry Research, Bogor, Indonesia.
- Aronen, T.S., Krajnakova, J., Häggman, H.M., Ryynänen, L.A. 1999. Genetic Fidelity of Cryopreserved Embryogenic Cultures of Open-Pollinated *Abies cephalonica*. *Plant Science* 142(2):163-172.
- Ashton P.S. 1982. *Dipterocarpaceae. Flora Malesiana Series I Flowering Plants Spermatophyta*. Lembaga Biologi Nasional, Bogor.
- Barcelo-Fimbres, M. and G.E. Seidel Jr. 2007. Effects of Fetal Calf Serum, Phenazine Ethosulfate and Either Glucose or Fructose During *In Vitro* Culture of Bovine Embryos on Embryonic Development After Cryopreservation. *Molecular Reproduction and Development*, 74:1395-1405.
- Bartels D. 2001. Targeting Detoxification Pathways: An Efficient Approach to Obtain Plants with Multiple Stress Tolerance. *Trends in Plant Science*, 6:284–286.
- Berjak, P. and Pammenter, N. W. 2013. Implications of The Lack of Desiccation Tolerance in Recalcitrant Seeds. *Frontiers in Plant Science*, 22(4):1-9.



- Best, P.B. 2015. Cryoprotectant Toxicity: Facts, Issues, and Questions. *Rejuvenation Research*, 18(5):422-436.
- Bettoni, J.C., Kretzschmar, A.A., Bonnart, R., Shepherd, A., and Volk, G.M. 2019. Cryopreservation of 12 Vitis Species Using Apical Shoot Tips Derived from Plants Grown In Vitro. *HortScience*, 54:976–981.
- Bhattacharya, Sankha. 2018. *Cryoprotectants and Their Usage in Cryopreservation Process*. [Internet]. [diunduh 10-04-2021]. Tersedia pada <http://dx.doi.org/10.5772/intechopen.80477>.
- Brockbank, K. G. M., Covault, J.C. and Taylor, M.J. 2004. *Cryopreservation Manual: A Guide to Cryopreservation Techniques*. Massachusetts: Thermo Electron Corporation.
- Burritt, D.J. 2012. Proline and The Cryopreservation of Plant Tissues: Functions and Practical Applications, Current Frontiers in Cryopreservation. *In book: Current Frontiers in Cryopreservation*, Chapter 20:415-429.
- Chmielarz, P. 2010. Cryopreservation of Conditionally Dormant Orthodox Seeds of *Betula pendula*. *Acta Physiologiae Plantarum*, 32:591–596.
- Coelho, S.V., Franco da Rosa, S.D.V.F., Fantazzini, T.B., Baiute, J.L., and Silva, L.C. 2018. Cryopreservation in *Coffea canephora* Pierre Seeds: Slow and Fast Cooling. *Ciência e Agrotecnologia*, 42(6):588-597.
- Copeland, L. O. and McDonald, M.B. 2001. *Principles of Seed Science and Technology. Fourth Edition*. Massachusetts: Kluwer Academic Publisher. 467 p.
- Djam'an, D.F., Priadi, D. dan Sudarmanowati, E. 2006. Penyimpanan Benih Damar (*Agathis damara* Salisb.) dalam Nitrogen Cair. *Biodiversitas*, 7(2):164-167.
- Figueiredo, P.S. and Pereira, M.F.A. 1985. Immature Seeds of *Phaseolus vulgaris* L.: Development, Germination and Reproductive Capacity of The Resulting Plants. *Revista Brasileira de Botânica*, 8:169-175.
- França-Neto and Krzyzanowski, F.C. 2019. Tetrazolium: An Important Test for Physiological Seed Quality Evaluation. *Journal of Seed Science*, 41(3).
- Galluzzi, L., Vitale, I., Kepp, O., and Kroemer, G. 2013. *Cell Senescence: Methods and Protocols*. New Jersey: Humana Press.
- Gresta, F., Anastasi, U., and Avola, J. 2007. Effect of Maturation Stage, Storage Time and Temperature on Seed Germination of *Medicago* Species. *Seed Science & Technology*, 35:698-708.
- Grout, B.W.W. 1995. Introduction to The *In Vitro* Preservation of Plant Cells, Tissues and Organs. *In Grout, B. (Ed.). Genetic Preservation of Plant Cells In Vitro*. Berlin-Heidelberg: Springer Lab Manual,1-17.



- Guo, X. Liu, D., and Chong, K. 2018. Cold Signaling in Plants: Insights into Mechanisms and Regulation. *Journal of Integrative Plant Biology*, 60(9):745–756.
- Halimursyadah. 2012. Pengaruh Kondisi Simpan Terhadap Viabilitas dan Vigor benih *Avicennia marina* (Forsk). Vierh. pada Beberapa Periode Simpan. *Jurnal Agrotropika*, 17(2):43-51.
- Hamilton, K.N., Offord,C.A., Cuneo, P., and Deseo, M.A. 2013. A Comparative Study of Seed Morphology in Relation to Desiccation Tolerance and Other Physiological Responses in 71 Eastern Australian Rainforest Species. *Plant Species Biology*, 28:51-62.
- Hartmann, H.T., Kester, D. E., Davies, F.T., and Geneve, R.L. 2011. *Plant Propagation : Principles and Practice 8th Ed.* New Jersey: Prentice Hall.
- Hasrawati, Mustari, K., dan Dachlan, A. 2015. Pengujian Viabilitas Benih Kacang Tanah (*Arachis Hypogaea L*) pada Berbagai Lama Penyimpanan dengan Menggunakan Uji Tetrazolium. *Jurnal Agrotan*, 1(2):94-107.
- Hay, F.R., Timple S., and van Duijn, B. 2015. Can Chlorophyll Fluorescence be Used to Determine The Optimal Time to Harvest Rice Seeds For Long-Term Genebank Storage ?. *Seed Science Reserch*, 25:321-334.
- Hopkins, William G. and Huner, N.P.A. 2009. *Introduction to Plant Physiology Fourt Edition.* The University of Western Ontario.
- [ISTA] International Rules for Seed Testing 2015. Full issue i-5-56 (60). *The International Seed Testing Association. Switzerland.*
- [ISTA] International Seed Testing Association *Chapter 5: The Germination.* 2018. *The International Seed Testing Association. Switzerland.*
- [IUCN] International Union for Conservation of Nature and Natural Resources. 2020. IUCN Red List of Threatened Species. [Internet]. [diunduh 01-02-2020]. Tersedia pada: <https://www.iucnredlist.org/species/32305/2813234>.
- Jitsopakul, N., hammasiri, K., Yukawa, T., and Ishikawa K. 2012. Effect of Cryopreservation on Seed Germination and Protocorm Development of *Vanda tricolor*. *Science Asia*, 38:244-249.
- Joker, Dorthe. 2000. *Seed Leaflet : Hopea odorata Robx.* Danida Forest Seed Centre, Krogerupvej, Denmark.
- Joshi, A.J. 2016. A Review and Application of Cryoprotectant: The Science of Cryonics. *Pharma Tutor*, 4(1):12-18.
- Justice, O. L. dan Bass, L.V. 2002. *Prinsip Praktek Penyimpanan Benih Terjemahan: Rennic.* Jakarta: Rajawali Press.
- Kaczmarczyk, A., B. Funnekotter, and A. Menon. 2011. *Current Issues in Plant Cryopreservation.* p. 417-438. In I.Y. Abdurakhmonov (ed.) *Plant Breeding.* Croatia: Intech Open Access Publisher.



- Kartha, K.K. 1985. Meristem Culture and Gerplasm Preservation. *dalam* Kartha, K.K. (Ed.). Cryopreservation of Plant Cell and Organs. Florida: Cue Press, p. 116-134.
- Khan, M.M., Iqbal, M.J., Abbas M., and Usman, M. 2003. Effect of Accelerated Ageing on Viability, Vigor and Chromosomal Damage in Pea (*Pisum sativum* L.) Seeds. *Pakistan Jurnal of Agricultural Science*, 40:50-54.
- Kim, D.H., Han, S.H., Ku,J., and Lee, K.Y. 2009. Effects of Cryoprotectants and Post-storage Primingon Seed Germination of Sugi (*Cryptomeria japonica* D. Don). *Silvae Genetica*, 58(4):162-168.
- Kostman, T. dan Setioko, A. R. 2011. Perkembangan Penelitian Teknik Kriopreservasi untuk Penyimpanan Semen Unggas. *Wartazoa*, 21(3):145-152.
- Kumar, S.P.J, Kumar, A., V, Ramesh K., Singh, C., Agarwal, D., Pal, G., Kuchlan, M.K., and Singh, R. 2020. Wall Bound Phenolics and Total Antioxidants in Stored Seeds of Soybean (*Glycine max*) Genotypes. *Indian Journal of Agricultural Sciences*, 90(1):118–22.
- Leprince, O., Pellizzaro, A., Berri, S. and Buitink, J. 2016. Review: Late Seed Maturation: Drying Without Dying. *Journal of Experimental Botany*, 6(4).
- Lestari, D.A. 2019. Tehnik Penyimpanan Benih Rekalsitran *Mesua Ferrea* L. dan *Swinglea glutinosa* (Blanco) Merr. *Jurnal Perbenihan Tanaman Hutan*, 7(1):31-44.
- Leunufna, S. 2007. Kriopreservasi untuk Konservasi Plasma Nutfah Tanaman: Peluang Pemanfaatannya di Indonesia. *Jurnal Agro Biogen*, 3(2):80-88.
- Li, Y., He, N., Hou, J., Xu, L., Liu, C., Zhang, J., Wang, Q., Zhang, X., and Wu, X. 2018. Factors Influencing Leaf Chlorophyll Content in Natural Forests at the Biome Scale. *Frontier in Ecology and Evolution*, 6(64):1-10.
- Liu, J., Wen, H., Hasanuzzaman, M., and Zhang, J. 2019. High Temperature and Drought Stress Cause Abscisic Acid and Reactive Oxygen Species Accumulation and Suppress Seed Germination Growth in Rice. *Protoplasma*, 256(5).
- Locascio, A., Roig-Villanova, I., and Varotto S. 2014. Current Perspectives on The Hormonal Control of Seed Development in Arabidopsis and Maize: A Focus on Auxin. *Frontier in Plant Science*, 5(412):1-22.
- Lodong, O., Tambing, Y., and Adrianto. 2015. Peranan Kemasan dan Media Simpan terhadap Ketahanan Viabilitas dan Vigor Benih Nangka (*Artocarpus heterophyllus* Lamk) kultivar tulo-5 Selama Penyimpanan. *Jurnal Agrotekbis*, 3(3):303–315.
- Luz, M.R., Holanda, C.C., Pereira, J.J., Teixeira, N.S., Vantini, R., Freitas, P.M.C., Salgado, A.E.P., Oliveira, S.B., Guaitolini, C.R.F. and Santos, M.C. 2009. Survival Rate and *In Vitro* Development of *In Vivo* Produced and



- Cryopreserved Dog Embryos. *Reproduction, Fertility and Development*, 22:208-209.
- Ly, V., Newman, M., Khou, E., Barstow, M., Hoang, V.S., Nanthavong, K., and Pooma, R. 2017. *Hopea odorata : The IUCN Red List of Threatened Species 2017:e.T32305A2813234*.
- Ma, D., Li, Y., Zhang J., Wang, C., Qin, H., Ding, H., Xie, Y., and Guo, T. 2016. Accumulation of Phenolic Compounds and Expression Profiles of Phenolic Acid Biosynthesis-Related Genes in Developing Grains of White, Purple, and Red Wheat. *Frontiers in Plant Science*, 7:528.
- Mahjabin, S.B. and Abidi, A.B. 2015. Physiological and Biochemical Changes During Seed Deterioration: A Review *International Journal of Recent Scientific Research*, 6(4):3416-3422.
- Manfre, A.J., LaHatte, G.A., Climer, C.R., and Marcotte, W.R. Jr. 2008. Seed Dehydration and the Establishment of Desiccation Tolerance During Seed Maturation is Altered in the *Arabidopsis thaliana* Mutant *atem6-1*. *Plant Cell Physiology*, 50(2):243-253.
- Mastuti, R. 2016. *Modul 1: Keseimbangan Air pada Tumbuhan*. Malang: Jurusan Biologi Fakultas MIPA, Universitas Brawijaya.
- Matsumo, T. and Niino, T. 2014. The Development of Plant Vitrification Solution 2 and Recent PVS2-Based Vitrification Protocols. *Acta Horticulturae*, 1039:21–28.
- Michalak, M., Plitta, B.P., Tylkowski, T., Chmielarz, P., and Suszka, J. 2015. Desiccation Tolerance and Cryopreservation of Seeds of Black Poplar (*Populus nigra L.*), A Disappearing Tree Species in Europe. *European Journal of Forest Research*, 134:53–60.
- Miura, K., and Furumoto, T. 2013. Cold Signaling and Cold Response in Plants. *International Journal of Molecular Science*, 14:5312-537.
- Montero-Tavera V., Ruiz-Medrano, R., and Xocnóstole-cávarez, B. 2008. Systemic Nature of Drought-Toleranxce in Common Bean. *Plant Signaling & Behavior*, 3:663–666.
- Narayanan S., Tamura P.J., Roth M.R., Prasad P.V.V., and Welti R. 2016. Wheat Leaf Lipids During Heat Stress: I. High Day And Night Temperatures Result in Major Lipid Alterations. *Plant Cell Environment*, 39(4):787–803.
- Ntuli, T.M., Finch-Savage, W.E., Berjak, P., and Pammenter, N.W. 2011. Increased Drying Rate Lowers The Critical Water Content for Survival in Embryonic Axes of English Oak (*Quercus robur L.*) seeds. *Journal of Integrative of Plant Biology*, 53:270-280.
- O'Brien, C., Hiti-Bandaralage, J.C., Folgado, R., Lahmeyer, S., Hayward, A., Folsom, J., and Mitter, N. 2021. First Report on Cryopreservation of Mature



- Shoot Tips of Two Avocado (*Persea Americana* Mill.) Rootstocks. *Plant Cell, Tissue and Organ Culture (PCTOC)*, 144:103-113.
- Olvera-Carrillo, Y., Reyes, J.L., and Covarrubias, A.A. 2011. Late embryogenesis Abundant Proteins Versatile Players in The Plant Adaptation to Water Limiting Environments. *Plant Signaling & Behavior*, 6: 586-589.
- Opik, H. and Rolfe, S. 2005. *The Physiology of Flowering Plants 4th Edition*. UK: Cambridge University Press.
- Orwa, C., Mutua, A., Kindt, R., Jamnadass, R., and Anthony, S. 2009. Agroforestry Database: A Tree Reference and Selection Guide Version 4.0. [Internet] [diunduh 29-04-2020] Tersedia pada: <http://apps.worldagroforestry.org/treedb/AFTPDFS/Hopea odorata.PDF>.
- Parks, J.E. and Graham, J.K. 1992. Effects of Cryopreservation Procedures on Sperm Membranes. *Theriogenology*, 38 : 209-222.
- Pl. Coromandel. 1811. *Plants of The Coast of Coromandel : Selected from Drawings and Descriptions Presented to The Hon. Court of Directors of The East India Company*. London : W. Bulmer an Co.
- Prada, J.A., Aguliar, M.E., Abdelnour-Esquivel, A., and Engelmann, F. 2015. Cryopreservation of Seeds and Embryos of *Jatropha curcas* L. *American Journal of Plant Sciences*, 6:172-180.
- Prasetyorini. 1999. Preservasi *Rauvovia serpentina* (L.) Benth. Ex Kurz. Melalui Teknik Kultur In Vitro. *Thesis doktoral*. Tidak dipublikasikan. Program Pascasarjana IPB, Bogor.
- Prudente, D.O. and Paiva, R. 2017. Plant Cryopreservation: Biochemical Aspects. *Journal of Cell and Developmental Biology*, 1(1):1-3.
- Pukacki, P.M. and Juszczak, K. 2015. Desiccation Sensitivity and Cryopreservation of The Embryonic Axes of The Seeds of Two Acer Species. *Trees*, 29:385-396.
- Purwaning, D. 2009. Struktur Benih dan Dormansi pada Benih Pangal Buaya (*Zanthoxylum rhetsa* (Roxb.) D.C. *Jurnal Manajemen Hutan Tropika*, 15(2):66-74.
- Purwaningsih. 2004. Sebaran Ekologi Jenis-Jenis Dipterocarpaceae di Indonesia. *Biodiversitas*, 5(2):89-95.
- Radha, R.K., Decruse, W.S. and Krishnan, P.N. 2012. Plant Cryopreservation, Current Frontiers in Cryopreservation, Prof. Igor Katkov (Ed.). [Internet]. [diunduh 25-08-2020] Tersedia pada: https://cdn.intechopen.com/pdfs/31877/InTech-Plant_cryopreservation.pdf
- Rahayu, A.D. dan Suharsi, T.K. 2015. Pengamatan Uji Daya Berkecambahan dan Optimalisasi Substrat Perkecambahan Benih Kecipir [*Psophocarpus tetragonolobus* L. (DC)]. *Buletin Agrohorti*, 3(1):18-27.



- Rahmawati dan Aqil, M. 2020. The Effect of Temperature and Humidity of Storage on Maize Seed Quality. *IOP Conf. Series: Earth and Environmental Science*, 484.
- Rantala, S. Kaseva, K., Karhu, S., Veteläinen, M., Uosukainen, M., and Häggman, H. 2019. Cryopreservation of *Ribes nigrum* (L.) Dormant Buds: Recovery Via In Vitro Culture to The Field. *Plant Cell, Tissue and Organ Culture*, 138:109-119.
- Reinhoud, P.J., Iren, F.V., and Kijne, J.W. 2000. Cryopreservation of Undifferentiated Plant Cells. In Engelmann, F. and H. Takagi (Eds.). *Cryopreservation of Tropical Plant Germplasm: Current Research Progress and Application*. IPGRI.p. 91-102.
- Rihan, H.Z., Kareem, F., El-Mahrouk, M.E., and Fuller, M.P. 2017. Artificial Seeds (Principle, Aspects and Applications). *Agronomy*, 7(71).
- Righetti, K., Vu, J.L., Pelletier S., et al. 2015. Inference Of Longevity-Related Genes from A Robust Co-Expression Network of Seed Maturation IdentifiesRegulators Linking Seed Storability to Biotic Defense-Related Pathways. *The Plant Cell*, 27:2692-2708.
- Robiansyah, I. dan Hamidi, A. 2019. Current Status of The Invasive Langkap Palm (*Arenga obtusifolia*) in Indonesia: Distribution, Impact on Biodiversity and Control Management. *Proceeding The 3rd Satreps Conference*, 1:111-118.
- Roostika, I., Darmawati, I., dan Megia, R. 2013. Optimasi dan Evaluasi Metode Kriopreservasi Purwoceng. *Jurnal Littri*, 19(3):147-157.
- Roostika, I., I. Mariska, dan N. Sunarlim. 2004a. Penyimpanan Ubi Kayu (*Manihot utilissima*) Secara Kriopreservasi dengan Teknik Vitrifikasi. *Jurnal Bioteknologi Pertanian*, 9(1):8-13.
- Roostika, I., I. Mariska, G.A. Wattimena, dan N. Sunarlim. 2004b. Penerapan Teknik Vitrifikasi pada Penyimpanan Ubi Jalar (*Ipomea batatas* (L) Lam.) Secara Kriopreservasi. *Jurnal Penelitian Pertanian* 23(1):117-122.
- Roostika, I., R. Megia, dan I. Darwati. 2007. Kriopreservasi Tanaman Purwoceng (*Pimpinella pruatjan* Molk.) dengan Teknik Vitrifikasi. *Berita Biologi*, 8(6):429-431.
- Sadjad. 1994. *Kuantifikasi Metabolisme Benih*. PT Widia Sarana Indonesia. 145pp.
- Sakai, A., Kobayashi, S., and Oiyama, I. 1990. Cryopreservationof Nucellar Cells of Navel Orange (*Citrus sinensis* Osb. var. *brasiliensis* Tanaka) by Vitrification. *Plant Cell Reproduction*, 9:30-33.
- Seki, M., Narusaka, M., Ishida J., Nanji T., Fujita M., Oono, Y., Kamiya, A., Nakajima, M., Enju, A.,Sakurai, T., Satau,M., Akiyama, K., Taji, T., Yamaguchi-Shinozaki, K., Carnici, P, Kawai, J., Hayashizaki, Y., and



- Shinozaki, K. 2002. Monitoring The Expression Profiles of 7000 Arabidopsis Genes under Drought and Cold Stresses Using Full-Lenght CDNA Microarray. *Plant Cell*, 1:61–72.
- Shabana and Ghazy, N. 2015. Effect of Storage Conditions and Packaging Material on Incidence of Storage Fungi and Seed Quality in Maize. *Journal of Plant Protection and Pathology*, 6(7).
- Sinniah, U.R. and Gattait, S. 2013. Cryopreservation of Immature *Parkia speciosa* Hassk. Zygotic Embryonic Axes Following Dessication or Exposure to Vitrification Solution. *Acta Physiologiae Plantarum*, 32:2629-2634.
- Smolikova, G.N. and Medvedev, S.S. 2015. Seed Carotenoids: Synthesis, Diversity, and Functions, *Russian Journal of Plant Physiology*, 62:1-13.
- Smolikova, G.N., Laman, N.A., and Boriskevich, O.V. 2011. Role of Chlorophylls and Carotenoids in Seed Tolerance to Abiotic Stressors. *Russian Journal of Plant Physiology*, 58:965-973.
- Solikin and Nurfadilah, S. 2017. Effect of Seed Maturity and Storage Duration on Germination of Sambiloto (*Andrographis paniculata*). *Biosaintifika*, 9(2):282-288.
- Squires, E.L., Keith, S.L. and Graham, J.K.. 2004. Evaluation of Alternative Cryoprotectants for Preserving Stallion Spermatozoa. *Theriogenology*, 62: 1056-1065.
- Stanwood, P.C. 1985. Cryopreservation of Seed Germplasm for Genetic Conservation, p. 199-226. In : K.K. Kartha (ed.). *Cryopreservation of Plant Cells and Tissues*. Florida : CRC Press.
- Stewart, R. and J. Bewlwy. 1980. Lipid Peroxidation Associated with Accelerated Ageing of Soybean Axes. *Plant Physiology*, 65:245-248.
- Subantoto, R. dan Prabowo, R. 2013. Pengkajian Viabilitas Benih dengan Tetrazolium Test pada Jagung dan Kedelai. *Mediagro*, 9(2):1-8.
- Sudarmonowati, E. 2000. Cryopreservation of Tropical Plants: Current Research Status in Indonesia. *Dalam* Engelmann, F. and H. Takagi (Eds.). *Cryopreservation of Tropical Plant Germplasm:Current Research Progress and Application*. IPGRI.
- Sudrajat, D.J. dan Nurhasybi, 2009. Penentuan Standar Mutu Fisik dan Fisiologis Benih Tanaman Hutan. *Info Benih*, (1):147-158.
- Sudrajat, D.J., Nurhabsyi, dan Bramasto, Y. 2015. Teknologi Penanganan Benih dan Bibit Untuk Memenuhi Standar Benih dan Bibit Bersertifikat. *Prosiding Teknologi Perbenihan, Silvikultur dan Kelembagaan dalam Peningkatan Produktivitas Hutan dan Lahan*, Bandar Lampung: 11 Agustus 2015. Hal 15-26.



- Suhendra, D H. dan Siregar, Luthfi A. M. 2014. Pengaruh Metode Straifikasi Suhu Rendah, Krioprotektan dan Kriopreservasi terhadap Viabilitas Benih Rosela (*Hibiscus sabdariffa L.*). *Jurnal Online Agroekoteknologi*, 2(4):1511-1517.
- Sukesh and Chandrashekhar, K.R. 2011. Effect of Temperature on Viability and Biochemical Changes During Storage of Recalcitrant Seeds of *Hopea ponga* (Dennst.) mabberly : An endemic Species of Western Ghats. *Research Journal Seed Science*, 4:106-116.
- Sukesh and Chandrashekhar, K.R. 2013. Effect of Temperature on Viability and Biochemical Changes During Storage of Recalcitrant Seeds of *Vatica chinensis L.* *International Journal of Botany*, 9(2):73-79.
- Tambunan, I. R. dan Mariska. I. 2003. Pemanfaatan Teknik Kriopreservasi dalam Penyimpanan Plasma Nutfah Tanaman. *Buletin Plasma Nutfah*, 9(2):10-18.
- Todorov, V. and Linkermann, A. 2017. Back to The Roots of Regulated Necrosis. *Journal of Cell Biology*, 216(2):303-304.
- Towill, L.E. and C. Walters. 2000. Cryopreservation of Pollen. In Engelmann, F. and H. Takagi (Eds.). *Cryopreservation of Tropical Plant Germplasm: Current Research Progress and Application*. IPGRI p. 115-129.
- Vendrame W., Faria R.T., Sorace M., Sahyun S.A. 2014. Review: Orchid Cryopreservation. *Ciência e Agrotecnologia*, 38(3):213-229.
- Verma, P. and Majee, M. 2013. Seed Germination and Viability Test in Tetrazolium (TZ) Assay. *Bio-Protocol*, 3(17).
- Wang, B., Wang, R.R., Cui, Z.H., Bi, W.L., Li, J.W., Li, B.Q., Ozudogru, E.A., Volk, G.M., and Wang, Q.C. 2014. Potential Applications of Cryogenic Technologies to Plant Genetic Improvement and Pathogen Eradication. *Biotechnology Advances*, 32(3):583–595.
- Wang, Y., Ji, S., Dai, H., Kong, X., Hao, J., Wang, S., Zhou, X., Zhao, Y., Wei, B., Cheng, S., and Zhou, Q. 2019. Changes in Membrane Lipid Metabolism Accompany Pitting in Blueberry During Refrigeration and Subsequent Storage at Room Temperature. *Frontiers in Plant Science*, 10:829.
- Wardani, F.F., Efendi, D., Dinarti, D., and Witono, J.R. 2019. Cryopreservation of Papaya Seeds Cv. Sukma, Callina, and Caliso: Effect of Loading Treatment and Immersion Time in Plant Vitrification Solution-2. *Nusantara Bioscience*, 11(1): 71-78.
- Yan, Q., Wen, B., Zhang, N., Yin, S.H. and Ji, M.Y. 2014. Cryopreservation Strategies for Pomelo Seeds from Xishuangbanna, South China. *Seed Science & Technology*, 42:202-213.
- Yan, X.F. , Cao, M. and Xu, H.L. 2007. Effects of Desiccation and Temperature on The Germination of *Shorea chinensis* (Dipterocarpaceae) Seeds. *Seed Science & Technology*, 35:232-236.



- Yazid, A. 2020. Viabilitas Benih Karet pada Beberapa Media Simpan dengan Lama Penyimpanan yang Berbeda. *Agrium*, 22(3).
- Zanzibar, M. 1996. *Aplikasi Uji Cepat Viabilitas pada Benih Tanaman Hutan, Prosiding Ekpose Program dan Hasil-Hasil Penelitian Perbenihan Kehutanan*. Bogor: Balai Teknologi Perbenihan, Badan Penelitian dan Pengembangan Departemen Kehutanan.
- Zanzibar, M., Rohandi, A., Herdiana, N., Mokodompit, S., Rohani K., E., dan Muharam, A. 2014. *Buku II : Pedoman Uji Cepat Viabilitas Benih Tanaman Hutan*. Bogor: Balai Penelitian Teknologi Perbenihan Tanaman Hutan.
- Zanzibar, M., Yuniarti, N., dan Damayanti, R.U. 2019. Teknik Penyimpanan Benih Meranti Balau (*Shorea seminis* (de Vriese) Sloot). *Jurnal Perbenihan Tanaman Hutan*, 7(2):113-125.
- Zhang, N., Wen, B, Ji, M, and Yan, Q. 2014. Low-Temperature Storage and Cryopreservation of Gapefruit (*Citrus paradise* Macfad.) Seeds. *Cryo Letters*, 35(5):418-42.
- Zhang, Z. and Huang, R. 2013. Analysis of Malondialdehyde, Chlorophyll Proline, Soluble Sugar, and Glutathione Content in *Arabidopsis* Seedling. *BioProtocol*, 3(14).