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PEMANFAATAN EKSTRAK KENIKIR (Cosmos sulphureus Cav.) SEBAGAI HERBISIDA NABATI UNTUK TEKI (Cyperus rotundus L.) PADA PERTANAMAN KEDELAI (Glycine max (L.) Merr.)
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DAFTAR PUSTAKA

Abenavoli, M.R, M. Badiani, A. Sorgona & G. Cacco. 2001. Effetti della cumarina el nitrato sullo stato antiossidante di semenza i di frumento duro (*Triticium durum* Desf. Cv. Simeto). Proc. Nat. Conf. of The Italian Society of Agricultural Chemistry (SICA). Pisa. 25–40 pp.

Abenavoli, M.R., A. Sorgona, M. Sidari, M. Badiani & A. Fuggi. 2003. Coumarin inhibits the growth of carrot (*Daucus carota* L. cv. Saint Valery) cell in suspension culture. J. Plant Physiol. 160: 227–237.

Abenavoli, M.R., A. Lupini, S. Oliva & A. Sorgona. 2010. Allelochemical effects on net nitrate uptake and plasma membrane H+ -ATPase activity in maize seedlings. Biol. Plant. 54: 149–153.

Adimihardja, M. 1992. Pengaruh Pemupukan Awal dan Inokulasi Rhizobium terhadap Pertumbuhan dan Hasil Beberapa Varietas Kedelai. Pusat Penelitian dan Pengembangan Tanaman Pangan. Bogor.

Adio, A.M. 2009. Germacrenes A – E dan senyawa terkait: termal, fotokimia dan asam, siklisasi transannular yang diinduksi. Tetrahedron. 65: 1533–1552.

Adisarwanto, T., Marwoto, D.M. Arsyad, A.G. Manshuri, R. Margono & Suryanto. 1998. Pola kebijakan peningkatan produksi kedelai menuju swasembada. Balai Penelitian Kacang-kacangan dan Umbi-umbian. Malang.

Adisarwanto, T. & R. Wudianto. 1999. Meningkatkan Hasil Panen Kedelai di Lahan Sawah-Kering-Pasang Surut. Penebar Swadaya. Jakarta.

Albuquerque, M.B., R.C. Santos, L.M. Lima, P.A. Melo-Filho, R.J.M.C. Nogueira, C.A.G. Câmara & A.R. Ramos. 2011. Allelopathy, an alternative tool to improve cropping systems. A review. Agron. Sust. Dev. 31: 379–395.

Aldrich, R.J. 1984. Weed – Crop Ecology: Principles in Weed Management. Breton Publishers. North Scituate Massachussetts. 465 p.

Alexieva, V., I. Sergief, S. Mapelli & E. Karanov. 2001. The effect of drought and ultraviolet radiation on growth and stress markers in pea and wheat. Plant Cell. Environ. 24: 1337–1344.

Aleksieva, A. & P. Marinov-Serafimov. 2008. A study of allelopathic effect of *Amaranthus retroflexus* (L.) and *Solanum nigrum* (L.) in different soybean genotypes. Herbologia. 9:47–58.

Ali, H.H., A. Tanveer, M.A. Nadeem, M.M. Javaid, M.S. Kashif & A.R. Chadhar. 2012. Allelopathic effects of *Rhynchosia capitata* on germination and seedling growth of mungbean. Planta Daninha. 31: 501–509.

Alsadon, A.A., M. A. Wahb-allah & S.O. Khalil. 2006. In vitro evaluation of heat stress tolerance in some tomato cultivars. J. King Saud Univ. Agric. Sci. 19: 13–24.

An, M., J. Pratley & T. Haig. 1998. Allelophaty: from concept to reality. Proc. of the 9th Australian Agronomy Conference. Wagga Wagga. 563–566 pp.

Anderson, W.P. 2007. Weed Science: Principles and Aplications. Third Edition. Waveland Press, Inc. USA. 59 p.

Anonim. 2005. Deskripsi Varietas Unggul Kacang-kacangan dan Umbi-umbian. Balai Penelitian Tanaman Aneka Kacang dan Umbi. Malang.

UNIVERSITAS
GADJAH MADA
PEMANFAATAN EKSTRAK KENIKIR (Cosmos sulphureus Cav.) SEBAGAI HERBISIDA NABATI UNTUK TEKI (Cyperus rotundus L.) PADA PERTANAMAN KEDELAI (Glycine max (L.) Merr.)
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Universitas Gadjah Mada, 2019 | Diunduh dari http://etd.repository.ugm.ac.id/

Anonim. 2015. Critical Weed Free Period. <http://www.thompsonslimited.com /2015/05/19/critical-weed-free-period/> (diakses 17 Februari 2017).

Anonim. 2016. Rekayasa Ekologi (Tanaman Refugia) untuk Sistem Prduksi Padi Berkelanjutan dan Tangguh. <http://distan.jogjaprov.go.id/index.php?option=com_content&view=article&id=8553:rekayasa-ekologitanamanrefugia-untuk-sistem-produksipadi-berkelanjutandantangguh&catid=41:artikel&Itemid=514> (diakses 16 Februari 2017).

Anonim. 2018. Produksi, Luas Panen dan Produktivitas Palawija di Indonesia, 2014 - 2018. <https://www.pertanian.go.id/Data5tahun/TPATAP2017(pdf)/01PalawijaNasional.pdf> (diakses 02 September 2019).

Anonim. 2019. Theories explaining growth of the plant at its apex and root tip. <https://www.flexiprep.com/NIOS-Notes/Biology/NIOS-Biology-Ch-5-Tissue-and-Other-Levels-of-Organization-Part-4.html> (diakses 30 Juni 2019).

AOSA (Association of Official Seed Analysis). 1988. Seed Vigor Testing Handbook, AOSA Handbook on Seed Testing Contribution No. 32. Ston Printing Company. Lansing, Michigan. 93 p.

Arini, N., D.W. Respatie & S. Waluyo. 2015. Pengaruh takaran SP36 terhadap pertumbuhan, hasil dan kadar karotena bunga *Cosmos sulphureus* Cav. dan *Tagetes erecta* L. di dataran rendah. Veg. 4: 1–14.

Arora, K., D.R. Batish, H.P. Singh & R.K. Kohli. 2015. Allelopathic potential of the essential oil of wild marigold (*Tagetes minuta* L.) against some invasive weeds. J. Environ. Agri. Sci. 3: 56–60.

Arunbabu, T. & S.N. Jena. 2018. Weeds and progressive weed management techniques in rice (*Oryza sativa* L.): a review. BEPLS 7: 108–117.

Arve, L.E., S.Torre., J.E. Olsen & K.K.Tanino. 2011.Stomatal Responses to Drought Stress and Air Humidity, Abiotic Stress in Plants - Mechanisms and Adaptations. Arun Shanker and B. Venkateswarlu, Ed. InTech Publisher. London. 267–280 pp.

Arvin, M.J. & D.J. Donnelly. 2008. Screening potato cultivars and wild species to abiotic stresses using an electrolyte leakage bioassay. J. Agric. Sci. Technol. 10: 33–42.

Ashrafi, Z.Y., S. Sadeghi, H.R. Mashhadi & M.A. Hassan. 2008. Allelopathic effects of sunflower (*Helianthus annus*) on germination and growth of wild barley (*Hordeum spontaneum*). IJAT. 4: 219–229.

Aslam, M., B. Sultana, F. Anwar & H. Munir. 2016. Foliar spray of selected plant growth regulators affected the biochemical and antioxidant attributes of spinach in a field experiment. Turk. J. Agric. For. 40: 136–145.

Audus, L.J. 1976. Herbicides. 2nd Edition. Vol 1. Academic Press. London. 608 p.

Ayep, A.E., H.B. Jannet & F.H. Skhiri. 2013. Effect of *Acacia cyanophylla* Lind. extracts on seed germination and seedling growth of four crop and weed plants. Turk. J. Biol. 37: 1–10.

Bais, H.P., R. Vepachedu, S. Gilroy, R.M. Callaway & J.M. Vivanco. 2003. Allelopathy and exotic plant invasion: from molecules and genes to species interactions. Science. 301: 1377–1380.

UNIVERSITAS
GADJAH MADA
PEMANFAATAN EKSTRAK KENIKIR (Cosmos sulphureus Cav.) SEBAGAI HERBISIDA NABATI UNTUK TEKI (Cyperus rotundus L.) PADA PERTANAMAN KEDELAI (Glycine max (L.) Merr.)
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Universitas Gadjah Mada, 2019 | Diunduh dari http://etd.repository.ugm.ac.id/

Bais, H.P., T.L. Weir, L.G. Perry, S. Gilroy & J.M. Vivanco. 2006. The role of root exudates in rhizosphere interactions with plants and other organisms. Annu. Rev. Plant Biol. 57: 233–266.

Bakkali, F., S. Averbeck, D. Averbeck & M. Idaomar. 2008. Biological effects of essential oils — a review. Food Chem. Toxicol. 46: 446–475.

Balai Penelitian Tanah (Balittanah). 2009. Analisis Kimia Tanah, Tanaman, Air dan Pupuk. Balai Penelitian Tanah. Bogor.

Baleroni, C.R.S., M.L.L. Ferrarese, N.E. Souza & O. Ferrarese-Filho. 2000. Lipid accumulation during canola seed germination in response to cinnamic acid derivates. Biol. Plant. 43: 313–316.

Bano, M.A.J.D., J. Lorente, J.A.N. Castillo, O.B. Garciaa, J.A.D. Rio, A. Ortuno, K.W. Quirin & D. Gerard. 2003. Phenolic diterpenes, flavones, and rosmarinic acid distribution during the development of leaves, flowers, stems, and roots of *Rosmarinus officinalis* antioxidant activity. J. Agric. Food Chem. 22: 4247−4253.

Barnes, J.P., A.R. Putnam & B.A. Burke. 1986. Allelopathic activity of rye (*Secale cereale* L.). *In*: A.R. Putnam & C.S. Tang (Eds.). The Science of Allelopathy. Wiley-Interscience. New York. 271–286 pp.

Batish, D.R., H.P. Singh, R.K. Kohli & S. Kaur. 2001. Crop allelopathy and its role in ecological agriculture. J. Crop. Prod. 4: 121–161.

Batish, D.R., K. Arora, H.P. Singh & R.K. Kohli. 2007. Potential utilization of dried powder of *Tagetes minuta* as a natural herbicide for managing rice weeds. Crop Prot. 26: 566–571.

Batish, D.R., H.P. Singh, S. Kaur, R.K. Kohli & S.S. Yadav. 2008. Caffeic acid affects early growth, and morphogenetic response of hypocotyl cuttings of mung bean (*Phaseolus aureus*). J. Plant Physiol. 165: 297–305.

Belz, R.G. 2007. Allelopathy in crop/weed interactions–an update. Pest Manag. Sci. 63: 308–326.

Bennet, T.P. 1968. Graphic Biochemistry Vol. 2. The Macmillan Co. New York.

Bernat, W., H. Gawronska, W. Zakresewska & S.W. Gawronski. 2007. Physiological effects of allelopathic activity of sunflower on mustard. Allelopath. J. 19: 1–10.

Bergin, D. 2011. Weed Control Options for Coastal Sand Dunes: A Review. New Zealand Forest Research Institute LTD. New Zealand. 5–13 pp.

Bergmark, C.L., W.A. Jackson, R.J. Volk & U. Blum. 1992. Differential inhibition by ferulic acid of nitrate and ammonium uptake in *Zea mays* L. Plant Physiol. 98: 639–645.

Bewly, J.D. 1997. Seed germination and dormancy. Plant Cell. 9: 1055–1066.

Beyer, W.F.Jr. & I. Fridovich. 1986. Assaying for Superoxide Dismutase Activity: Some Large Consequences of Minor Changes in Conditions. Anal. Biochem. 161: 559–566

Blainski, A., G.C. Lopes & J.C.P. de Mello. 2013. Application and analysis of the folin ciocalteu method for the determination of the total phenolic content from *Limonium brasiliense* L. Molecules. 18: 6852–6865.

UNIVERSITAS
GADJAH MADA
PEMANFAATAN EKSTRAK KENIKIR (Cosmos sulphureus Cav.) SEBAGAI HERBISIDA NABATI UNTUK TEKI (Cyperus rotundus L.) PADA PERTANAMAN KEDELAI (Glycine max (L.) Merr.)
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Universitas Gadjah Mada, 2019 | Diunduh dari http://etd.repository.ugm.ac.id/

Blum, U. 1996. Allelopathic interactions involving phenolic acids. J. Nemat. 28: 259–267.

Blum, A. & A. Ebercon. l981. Cell membrane stability as a measure of drought and heat tolerance in wheat. Crop Sci. 21: 43–47.

Bogatek, R. & J. Stephien. 2003. Allelophatic potential of sunflower. I. effect on reserve mobilization and energy generation in germinating mustard (*Sinapsis alba* L.) seeds. Acta Physiol. Plant. 25: 5–17.

Bogatek, R., A. Gniadzwoska, W. Zakrzewska, K. Oracz & S.W. Gawronski. 2006. Allelopathic effects of sunflower extracts on mustard seed germination and seedling growth. Biol. Plant. 50: 156–158.

Botsaris, A.S. 2007. Plants used traditionally to treat malaria in Brazil: the archives of flora medicinal. J. Ethnobiol. Ethnomed. 3: 14–18.

Bouazizi, H., H. Jouili & E.E. Ferjani. 2007. Effects of copper excess on growth, H_2O_2 production and peroxidase activities in maize seedling (*Zea mays*). Pak. J. Biol. Sci. 10: 751–756.

Bradford, M.M. 1976. A rapid and sensitive method for the quantitation of microgram quantities of protein utilizing the principle of protein-dye binding. Anal. Biochem. 72: 248–254.

Braithwaite, A. & F.J Smith. 1995. Chromatographic Methods. Kluwer Academic Publishers. London.

Brandli, D. & S. Reinacher. 2012. Herbicides found in human urine. Ithaka J. 1: 270–272.

Bremner, J.M. & C.S. Mulvaney. 1982. Nitrogen total. *In*: A.L. Page, R.H. Miller & D.R. Keeny (Eds.). Methods of Soil Analysis, Part 2. Chemical and bilogical properties. Second Edition. Agronomy Monograph No. 9. ASA Inc. and SSSA Inc. Madison, Winconsin, USA. 595–624 pp.

Burgos, N.R., R.E. Talbert, K.S. Kim & Y.I. Kuk. 2004. Growth inhibition and root ultrastructure of cucumber seedlings exposed to allelochemicals from rye (*Secale cereale*). J. Chem. Ecol. 30: 671–689.

Cai, S.L. & X.Q. Mu. 2012. Allelopathic potential of aqueous leaf extracts of *Datura stramonium* L. on seed germination, seedling growth and root anatomy of *Glycine max* (L.) Merrill. Allelopath. J. 30: 235–245.

Campbell, G.J., D.H. Lambert, T. Arnason & G.H.N. Towers. 1982. Allelopathic properties of c-terthienyl and phenylheptatriyne, naturally occurring compounds from species of asteraceae. J. Chem. Ecol. 8: 961–973.

Chauvel, B., J.P. Guillemin, J. Gasquez & C. Gauvrit. 2012. History of chemical weeding from 1944 to 2011 in France: changes and evolution of herbicide molecules. Crop Prot. 42: 320–326.

Cheng, F. & Z. Cheng. 2015. Research progress on the use of plant allelopathy in agriculture and the physiological and ecological mechanism of allelopathy. Front. Plant Sci. 6: 1–16.

Chotimah, H.E.N.C, S. Yahya, M. Ghulamahdi & S. Sabiham. 2013. Aluminum-induced physiological responses of Aloe vera grown in the presence of phenolic and carboxylic acid derivatives. J. Agripeat. 14: 70–77.

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PEMANFAATAN EKSTRAK KENIKIR (Cosmos sulphureus Cav.) SEBAGAI HERBISIDA NABATI UNTUK TEKI (Cyperus rotundus L.) PADA PERTANAMAN KEDELAI (Glycine max (L.) Merr.)
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Universitas Gadjah Mada, 2019 | Diunduh dari http://etd.repository.ugm.ac.id/

Cakmak, I., D. Strbac & H. Marschner. 1993. Activities of hydrogen peroxide scavenging enzymes in germinating wheat seeds. J. Exp. Bot. 44: 127–132.

Chon, S.U., Y.M. Kim & J.C. Lee. 2003. Herbicidal potential and quantification of causative allelochemicals from several compositae weeds. Weed Res. 43: 444–450.

Chozin, M.A., Y. Delsi, R. Saputra, N. Syarifi, S.A. Arifin & S. Zaman. 2013. Some studies on allelophatic potential of *Cyperus rotundus* L. Proceedings of 24th Asian-Pacific Weed Science Society Conference. Bandung.

Chung, I.M. & D.A. Miller. 1995. Natural herbicide potential of alfalfa residue on selected weed species. Agron. J. 87: 920–925.

Chung, I.M. 2002. Screening of allelochemicals on barn yard grass (*Echinochloa crus-galli*) and identification of potentially allelopathic compounds from rice (*Oryza sativa*) variety hull extracts. Crop Prot. J. 21: 913–920.

Chung, I.M. 2003. Comparison of allelopathic potential of rice leaves, straw, and hull extracts on barn yard grass. Agron. J. 95: 1063–1070.

Collado, M.B., M.J. Arturi, M.B. Aulicino & M.C. Molina. 2010. Identification of salt tolerance in seedling of maize (*Zea mays* L.) with the cell membrane stability trait. Int. Res. J. Plant Sci. 1: 126–32.

Cruz-Ortega, R., A.L. Anaya & L. Ramos. 1988. Effects of allelopathic compounds of corn pollen on respiration and cell division of watermelon. J. Chem. Ecol. 14: 71–86.

Cruz-Ortega, R., G. Ayala-Cordero & A.L. Anaya. 2002. Allelochemical stress produced by the aqueous leachate of *Callicarpa acuminata*: effects on roots of bean, maize, and tomato. Physiol. Plant. 116: 20–27.

Dadkhah, A. 2015. Allelopathic potential of canola and wheat to control weeds in soybean (*Glycine max*). Russ. Agric. Sci. 41: 111–114.

Dalton, B.R. 1999. The occurance and behavior of plant phenolics acid in soil environmental and their potential involvement in allelochemical interference interaction: methodological limitation in establishing conclusive proof of allelopathy. *In*: Inderjit, K.M.M. Daksini & C.L. Foy (Eds). Principles and Practices in Plant Ecology: Allelochemical Interaction. CRC Press. Florida. 57–74 pp.

Darana, S. 2013. Allelophatic activity of lantana leaf extract (*Lantana camara*) on the weed in tea (*Camellia sinensis*). Proceedings of 24th Asian-Pacific Weed Science Society Conference. Bandung.

Darmadji, P., Supriyadi & Hidayat, 1999. Produksi asap cair limbah padat rempah dengan cara pirolisa. Agritech. 19: 11–15.

De Datta, S.K. 1981. Principles and Practices of Rice Production. John Wiley and Sons. New York. 618 p.

Delvin, M.D. & F.H. Witham. 1983. Plant Physiology. Williard Grant Press. Boston.

UNIVERSITAS
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PEMANFAATAN EKSTRAK KENIKIR (Cosmos sulphureus Cav.) SEBAGAI HERBISIDA NABATI UNTUK TEKI (Cyperus rotundus L.) PADA PERTANAMAN KEDELAI (Glycine max (L.) Merr.)
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Universitas Gadjah Mada, 2019 | Diunduh dari http://etd.repository.ugm.ac.id/

Del Río, L.A., L.M. Sandalio, J.M. Palma, P. Bueno & F.J. Corpas. 1992. Metabolism of oxygen radicals in peroxisomes and cellular implications. Free Radic. Biol. Med. 13: 557–580.

De Wit, C.T. & T.H. Alberda. 1961. Transpiration coefficient and transpiration rate of three grain species in growth chambers. JAARB. I.B.S. 73–81.

Ding, J., Y. Sun, C.L. Xiao, K. Shi, Y.H. Zhou & J.Q. Yu. 2007. Physiological basis of different allelopathic reactions of cucumber and fig leaf gourd plants to cinnamic acid. J. Exp. Bot. 58: 3765–3773.

Dix, N.J. & J. Webster. 1995. Fungal Ecology. Chapman and Hall. London.

Djurdjevic, L., A. Dinic, P. Pavlovic, M. Mitrovic, B. Karadzic & V. Tesevic. 2004. Allelopathic potential of *Allium ursinum* L. Biochem. Syst. Ecol. J. 32: 533–544.

Doorenbos, J. & A.H. Kassam. 1979. Yield response to water. FAO Irrigation and Drainage Paper No 33. 193 p.

Duke, S.O. & J. Lydon. 1993. Natural phytotoxins as herbisida, pes control with enhadce environmental safety. ACS Symp. Ser. Am. Chem. Soc. 542: 111–121.

Duke, S.O. & J. Lydon. 1993. Natural phytotoxins as herbisida. Pes control with enhadce environmental safety. ACS symp ser 542. Am. Chem. Soc. 111-121.

Duke, S.O., F.E. Dayan, J.G. Romagni & A.M. Rimando. 2000. Natural products as a source of herbicides: current status and future trends. Weed Res. 40: 99–111.

Durigan, J.C., P.C. Timossi & N.M. Correia. 2006. Integrated management of purple nutsedge on sugarcane yield. Planta Daninha. 24: 77–81.

Drost, D.C. & J.D. Doll. 1980. The allelopathic effect of yellow nutsedge (*Cyperus esculentus*) on corn and soybeans. Weed Sci. 28: 229–233.

Eberhart, S.A. & W.A. Russell. 1966. Stability parameters for comparing varieties. Crop Sci. 6: 36–40.

Einhellig, F.A. & J.A. Rasmussen. 1989. Prior cropping with grain sorghum inhibits weeds. J. Chem. Ecol. 15: 951–960.

Einhellig, F.A. 1995. Mechanism of action of allelochemichals in allelopathy. *In*: Inderjit, K.M.M. Daksini & F.A. Einhellig (Eds.). Allelopathy: organism, prosesses and aplications. Am. Chem. Soc. Washington D.C.

Einhellig, F.A. 1996. Interactions involving allelopathy in cropping systems. Agron. J. 88: 886–893.

Einhellig, F.A. 2004. Mode of allelochemical action of phenolic compounds. *In*: F.A. Macías, J.C.G. Galindo, J.M.G. Molinillo & H.G. Cutler. Allelopathy: Chemistry and Mode of Action of Allelochemicals. CRC Press. Florida. 217–255 pp.

Elakovich, S.D. & J.W. Wooten. 1995. Allelopathic woody plant, part I: *Abies alba* through *Lyonia lucida*. Allelopath. J. 2: 117–146.

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GADJAH MADA
PEMANFAATAN EKSTRAK KENIKIR (Cosmos sulphureus Cav.) SEBAGAI HERBISIDA NABATI UNTUK TEKI (Cyperus rotundus L.) PADA PERTANAMAN KEDELAI (Glycine max (L.) Merr.)
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Universitas Gadjah Mada, 2019 | Diunduh dari http://etd.repository.ugm.ac.id/

El-Rokiek, K.G. 2007. Evaluating the physiological influence of benzoic and cinnamic acids, alone or in combination on wheat and some infested weeds comparing with the herbicide isoproturon. Ann. Agric. Sci. 52: 45–58.

El-Rokiek, K.G., I.M. El-Metwally, N.K. Messiha & S.A.S. El-Din. 2007. Influence of some herbicides on the growth and propagative capacity of purple nutsedge (*Cyperus rotundus* L.). J. Agric. Sci. 32: 2477–2489.

El-Rokiek, K.G., T.A. El-Shahawy & F.A. Sharara. 2006b. New approach to use rice straw waste for weed control II. The effect of rice straw extract and fusillade (herbicide) on some weeds infesting soybean (*Glycin max* L.). Int. J. Agric. Biol. 8: 269–275.

El-Rokiek, K.G., S.A.S. El-Din & R.R. El-Masry. 2006a. Improving the control of purple nutsedge (*Cyperus rotundus* L.) with glyphosate by preconditioning treatment with benzyl adenine. Egypt. J. Appl. Sci. 21: 79–96.

El-Rokiek, K.G., S.A.S. El-Din, N.K. Messiha & R.R. El-Masry. 2009. Effect of growth regulators, alar or trichlorobenzoic acid and the herbicide basagran on the growth and propagative capacity of purple nutsedge (*Cyperus rotundus* L). Ann. Agric. Sci. 54: 59–75.

Ervin, G.N. & R.G. Wetzel. 2000. Allelochemical autotoxicity in the emergent wetland macrophyte *Juncus effuses* (juncaceae). Am. J. Bot. 87: 853–860.

Farooq, M., A. Wahid, N. Kobayashi, D. Fujita & S.M.A. Basra. 2009. Plant drought stress: effects, mechanisms and management. Agron. Sustain. Dev. 29:185–212.

Ferell, J.A., H.J. Earl & W.K. Vencill. 2004. Duration of yellow nutsedge (*Cyperus esculentus*) competitiveness after herbicide treatment. Weed Sci. 52: 24–27.

Fraenkel, G.S. 1959. The raison d'Etre of secondary plant substances. Science. 129: 1466–1470.

Frankton, G. 1977. Biology and Chemistry of the Compositae. Academic Press. New York.

Gardner, F.P., R.B. Pearce & R.L. Mitchel. 1991. Physiologi of Crop Plant Metabolism. Freeman, Cooper & Company. San Fransisco. 592 pp.

Geng, G.D., S.Q. Zhang & Z.H. Cheng. 2009. Effects of different allelochemicals on mineral elements absorption of tomato root. China Veget. 4: 48–51.

Gill, A.S. & J.V.N.S. Prasad. 2000. Allelopathic interactions in agroforestry systems. *In*: S.S. Narwal, R.E. Hoagland, R.H. Dilday & M.J. Reigosa (Eds). Allelopathy in Ecologycal Agriculture and Forestry. Kluwer Acadademic Publisher. Dharwad, India. 195–207 pp.

Goodwin, T.W. & E.I. Mercer. 1990. Introduction to Plant Biochemistry 2nd. Pergamon Press. Saint Louis, Missouri, USA. 677 p.

Gonzalez, V.M., J. Kazimir, C. Nimbal, L.A. Weston & G.M. Cheniae. 1997. Inhibition of a photosystem II electron transfer reaction by the natural product sorgoleone. J. Agric. Food Chem. 45: 1415–142.

Gonzales, L., X.C. Souto & M.J. Reigoza. 1997. Weed control by *Capsicum annum.* Allelopath. J. 4: 101–109.

UNIVERSITAS
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PEMANFAATAN EKSTRAK KENIKIR (Cosmos sulphureus Cav.) SEBAGAI HERBISIDA NABATI UNTUK TEKI (Cyperus rotundus L.) PADA PERTANAMAN KEDELAI (Glycine max (L.) Merr.)
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Gniazdowska, A. & R. Bogatek. 2005. Allelopathic interactions beetwen plants, multisite action of allelochemicals. Acta Physiol. Plant. 27: 395–407.

Guha, G.D., Sengupta, G.I. Raseneni & A.R. Reddy. 2009. An integrated diagnostic approach to understand drought tolerance in mulberry (*Morus indica* L). Flora. 205: 144–151.

Gupta, O.P. 1984. Scientific Weed Management. Printers and Publisher. New Delhi.

Halliwell, B. & J.M.C. Gutteridge. 1999. Free Radicals in Biology and Medicine. Oxfod University Press. UK.

Hall, D.W., V.V. Vandiver & J.A. Ferrell. 2009. Purple nutsedge, *Cyperus rotundus* L. University of Florida : SP37.

Han, C.M., K.W. Pan, N. Wu, J.C. Wang & W. Li. 2008. Allelopathic effect of ginger on seed germination and seedling growth of soybean and chive. Sci. Hortic. 116: 330–336.

Handayani, T., P. Basunanda, R.H. Murti & E. Sofiari. 2013. Pengujian stabilitas membran sel dan kandungan klorofil untuk evaluasi toleransi suhu tinggi pada tanaman kentang. J. Hort. 23: 28–35.

Handelman, G.J. 2001. The evolving role of carotenoids in human biochemistry. Nutrition. 17: 818–822.

Harborne, J.B. 1980. Plant phenolics. *In*: E.A Belt & B.V. Charwood (Eds.). Secondary Plant Product. Springer–Verlag. Berlin. 329–334 pp.

Harborne, J.B. 1987. Metode Fitokimia. Penuntun Cara Modern Menganalisis Tumbuhan. (Diterjemahkan oleh K. Padmawinata & I. Soediro). ITB. Bandung.

Harborne, J.B. 2005. Phytochemical Methods – A guide to Modern Techniques of Plant Analysis. 3rd Eds. Springer – Verlag. Berlin. 43–45 pp.

Hardjowigeno, S. 1987. Ilmu Tanah. Akademika Pressindo. Jakarta. 286 p.

Hariandi, D., D. Indradewa & P. Yudono. 2016. Correlation analysis of yield and yield components of seven soybean cultivars on weed competition. Int. J. Sci. Res. 5: 2151–2155.

Harren, F.J.M. & J. Reuss. 1977. Photoacoustic Spectroscopy. *In*: Encyclopedia of Applied Physics. Trigg (GL) (Eds.). VCH Wenhein. 19: 413–435.

Hartley, R.D. & D.C. Whitehead. 1973. Phenolics acid in soils and their influence on plant growth and soil microbial processes. *In*: D. Vaugham & R.E. Malcolm (Eds.). Soil Organic Matter and Biological Activity. Martinas Nijhhoff/Dr W. Junk Publishers. Netherland. 109–149 pp.

Heidarzade, A., H. Pirdashti, M.A. Esmaeili & J. Asghari. 2012. Inhibitory activity of allelochemicals on barnyardgrass (*Echinochloa crus-galli* L.) seed and seedling parameters. World App. Sci. J. 17: 1535–1540.

Hendrival, Z. Wirda & A. Azis. 2014. Periode kritis tanaman kedelai terhadap persaingan gulma. Jurnal Floratek. 9: 6–13.

Heywood, V., J. Harborne & B.L. Turner. I977. Biology and Chemistry of The Compositae. Academic Press. New York.

UNIVERSITAS
GADJAH MADA
PEMANFAATAN EKSTRAK KENIKIR (Cosmos sulphureus Cav.) SEBAGAI HERBISIDA NABATI UNTUK TEKI (Cyperus rotundus L.) PADA PERTANAMAN KEDELAI (Glycine max (L.) Merr.)
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Universitas Gadjah Mada, 2019 | Diunduh dari http://etd.repository.ugm.ac.id/

Hidajat, O.O. 1985. Morfologi Tanaman Kedelai. *In*: Kedelai. Badan Litbang Pertanian. Puslitbangtan. Bogor.

Hoagland, R.E., N.D. Teaster & C.D. Boylette. 2013. Bioherbicidal effects of *Myrothecium verrucariaon* glyphosateresistant and-susceptible *Palmer amaranth* biotypes. Allelopath. J. 31: 367–376.

Holm, L.G., D.L. Plucknett, J.V. Pancho & J.P. Herberger. 1991. The World's Sworst Weeds: Distribution and Biology. Krieger Pub. Co. Malabar, FL, USA. 610 p.

Hong, N.H., T.D. Xuan, T. Eiji & T.D. Khanh. 2004. Paddy weed control by higher plants from Southeast Asia. Crop Prot. J. 23: 255–261.

Horowitz, M. 1992. Mechanisms of establishment and spreading of *Cyperus rotundus* – the worst weed of warm regions. Proc. First Int. Weed Cont. Congr. 1: 94–97.

Huang, J.H., R. Fu, C.X. Liang, D.F. Dong & X.L. Luo. 2010. Allelopathic effects of cassava (*Manihot esculenta* crantz.) on radish (*Raphanus sativus* L.) and ryegrass (*Lolium perenne* L.). Allelopath. J. 25: 155–162.

Huda-Faujan, N., A. Noriham, A.S. Norrakiah & A.S. Babji. 2009. Antioxidant activity of plants methanolic extracts containing phenolic compounds. Afr. J. Biotechnol. 8: 484–489.

Hussain, M.I., L. Gonzalez & M.J. Reigosa. 2011. Allelopathic potential of *Acacia melanoxylon* on the germination and root growth of native species. Weed Biol. Manag. 11: 18–28.

Hussain, I., N.B. Singh, A. Singh & H. Singh. 2017. Allelopathic potential of sesame plant leachate against *Cyperus rotundus* L. Ann. Agrar. Sci. 15: 141–147.

Hyder, P.W., E.L. Fredricson, R.E. Estell, M. Tellez & R.R Gibbens. 2002. Distribution and concentration of total phenolics, condensed tannins, and nordihydroguaiaretic acid (NDGA) in creostebush (*Larrea tridentata*). Biochem. Syst. Ecol. 30: 905–912.

Idu, M. & O. Oghale. 2013. Studies on the allelopathic effect of aqueous extract of *Ageratum conyzoides* asteraceae on seedling growth of *Sesamum indicum* L. (pedaliaceae). Int. J. Sci. E.nviron. Technol. 2: 1185–1195.

Inam B., F. Hussain & B. Farhat. 1987. Allelopathic effects of Pakistani weeds: *Xanthium strumarium* L. Pak. J. Sci. Ind. Res. 30: 530–533.

Inamullah, N. Rehman, N.H. Shah, M. Arif, M. Siddiq & I.A. Mian. 2011. Correlations among grain yield and yield attributes in maize hybrids at various nitrogen levels. Sarhad J. Agric. 27: 531–538.

Inderjit & S. Duke. 2003. Ecophysiological aspect of allelopathy. Planta. 217: 529–539.

Inderjit & K.I. Keating. 1999. Allelopathy: principles, procedures, processes, and promises for biological control. In: Sparks DL (ed). Adv. Agron. San Diego: Acad. Pr. 67: 141–231.

Inderjit & K.G. Mukerji. 2005. Allelochemicals: Biological Control of Plant Patogens and Disesaes. Springer. India. 214 p.

UNIVERSITAS
GADJAH MADA
PEMANFAATAN EKSTRAK KENIKIR (Cosmos sulphureus Cav.) SEBAGAI HERBISIDA NABATI UNTUK TEKI (Cyperus rotundus L.) PADA PERTANAMAN KEDELAI (Glycine max (L.) Merr.)
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Universitas Gadjah Mada, 2019 | Diunduh dari http://etd.repository.ugm.ac.id/

Indradewa, D. 2001. Gatra agronomis dan fisiologiss pengaruh genangan dalam parit pada tanaman kedelai. Disertasi. Universitas Gadjah Mada. Yogyakarta. 302 p. Tidak dipublikasikan.

Ishikura, Y., Y. Kojima & M. Terazawa. 2001. Effects of phenolic compounds on seed germination of shirakaba birch, *Betula platyphylla* var. japonica. Eurasian J. For. Res. 2: 17–25.

ISTA (International Seed Testing Associations). 1999. International rules for seed testing. Seed Sci. Technol. 27: 45–48.

Jabran, K., G. Mahajan, V. Sardana & B.S. Chauhan. 2015. Allelopathy for weed control in agricultural systems. Crop Prot. 72: 57–65.

Javaid A., S. Shafique, R. Bajwa & S. Shafique. 2004. Effect of aqueous extracts of allelopathic crops on germination and growth of *Parthenium hysterophorus* L. S. Afr. J. Bot. 72: 609–612.

Jose, S. 2002. Black walnut allelopathy: current state of the science. *In*: Inderjit & A.U. Malik (Eds.). Chemical Ecology of Plants: Allelopathy in Aquatic and Teresstrial Ecosystems. Basal, Birkhauser-Verlag AG, Swisterland.

Junaedi, A., M.A. Chozin & K.H. Kim. 2006. Perkembangan terkini kajian alelopati. J. Hayati. 13: 79–84.

Jung, W.S., K.H. Kim, J.K. Ahn, S.J. Hahn & I.M. Chung. 2004. Allelopathic potential of rice (*Oryza sativa* L.) residues against *Echinochloa crus-galli*. Crop Prot. 23: 211–218.

Kaisoon, O., S. Siriamornpun, N. Weerapreeyakul & N. Meeso. 2011. Phenolic compounds and antioxidant activities of edible flowers from Thailand. J. Funct. Foods. 3: 88–99.

Kaisoon, O., I. Konczak & S. Siriamornpun. 2012. Potential health enhancing properties of edible flowers from Thailand. Food Res. Int. 46: 563–571.

Kale, S., S. Naik & S. Deodhar. 2005. Utilization of *Cosmos sulphureus* Cav. flower dye on wool using mordant combinations. Nat. Prod. Rad. 5: 19–24.

Kamil, J. 1979. Teknologi Benih 1. Angkasa. Bandung. 227 p.

Kanchan, S.D. & Jayachandra. 1979. Allelopathic effects of *Parthenium hysterophorus* L. III. inhibitory effects of weed residues. Plant Soil. 53: 37–47.

Kato, N.H. & T. Ino. 2003. Rice seedlings release momilactone-B into the environment. Phytochemistry. 63: 551–554.

Kaur, G., M.S. Alamb, Z. Jabbar, K. Javed & M. Athar. 2006. Evaluation of antioxidant activity of *Cassia siamea* flowers. J. Ethnopharmacol. 108: 340–348.

Kaur, I. & R. Sharma. 2016. Allelopathic effect of *Ageratum conyzoides* on chlorophyll content in the leaves of mungbean. Int. J. Recent Sci. Res. 7: 13296–13297.

Kementrian Pertanian. 2012. Metode Standar Pengujian Efikasi Herbisida Tahun 2012. Departemen Pertanian. Jakarta. 257 p.

UNIVERSITAS
GADJAH MADA
PEMANFAATAN EKSTRAK KENIKIR (Cosmos sulphureus Cav.) SEBAGAI HERBISIDA NABATI UNTUK TEKI (Cyperus rotundus L.) PADA PERTANAMAN KEDELAI (Glycine max (L.) Merr.)
DYAH WENY RESPATIE, Prof. Dr. Ir. Prapto Yudono, M.Sc.; Dr. Ir. Aziz Purwantoro, M.Sc.; Prof. Ir. Y. Andi Trisyono
Universitas Gadjah Mada, 2019 | Diunduh dari http://etd.repository.ugm.ac.id/

Khaliq, A., A. Matloob, M.B. Khan & A. Tanveer. 2013. Differential suppression of rice weeds by allelopathic plant aqueous extracts. Planta Daninha. 31: 21–28.

Khanh, T.D., N.H. Hong, D.Q. Nhan, S.L. Kim, I.M. Chung & T.D. Xuan. 2006. Herbicidal activity of *Stylosanthes guianensis* and its phytotoxic components. J. Agron. Crop Sci. 192: 427–433.

Khan R. & M.A. Khan. 2010. Weed control efficiency of bioherbicides and their impact on grain yield of wheat (*Triticum aestivum* L.). Eur. J. Appl. Sci. 4: 216–219.

Kim, J.S., W.K. Shin., T.J. Kim & K.Y. Cho. 1994. Sprouting characteristics and herbicidal responses of purple nutsedge. Korean J. Weed Sci. 14: 120–127.

Kissmann, K.G. & D. Groth. 1999. Plantas infestantes e nocivas. 2th. Edition. Basf. São Paulo.

Krishnan, H.B. 2005. Engineering soybean for enhanced sulfur amino acid content. Crop Sci. 45: 454–461.

Kobayashi, K. 2004. Factors affecting phytotoxic activity of allelochemicals in soil. Weed Biol. Manag. 4: 1–7.

Kozlowski, T.T. 1972. Plant response and control of water balance. Academic Press, Inc. New York.

Kong, C. 2004. Two compounds from allelopathic rice accession and their inhibitory activity on weeds and fungal pathogens. Phytochemistry. 5: 1123–1128.

Kumar, D., M.A. Yusuf, P. Singh, M. Sardar & N.B. Sarin. 2014. Histochemical detection of superoxide and H_2O_2 accumulation in *Brassica juncea* seedlings. <http://www.bio-protocol.org/.>. (diakses 31 Desember 2018).

Kupidlowska, E. & R. Bogatek. 2003. Alleopathic potential of sunflower II Ultrastructure changes in germinating white mustard (*Sinapsis alba* L.) seeds treated with water extract from sunflower (*Helliantus annus* L.) leaves. Acta Physiol. Plant. 25: 89–90.

Kropt, M.J. & L.A.P. Lotz. 1992. System approaches to quantity crop-weed interactions and their application on weed management. Agric. Sys. 40: 265–282.

Kupidlowska, E., B. Bieniak, A. Ruchirawat & A.M. Zobel. 1996. Influence of methyl derivatives of coumarin on mitotic activity and ultrastructure of meristematic cells of Allium cepa root tips. Phytomedic. 2: 275–281.

Lestari, E.G. 2006. Hubungan antara kerapatan stomata dengan ketahanan kekeringan pada somaklon padi Gajahmungkur, Towuti, dan IR 64. Biodiversitas. 7: 44–48.

Li, Z.H., Q. Wang, X. Ruan, C.D. Pan & J. De-An. 2010. Phenolics and plant allelopathy. Molecules. 15: 8933–8952.

Lichtenthaler, H.K. 1987. Chlorophyll and carotenoids: pigments of photosyntethetic biomembranes. Methods Enzymol. 148: 350–382.

UNIVERSITAS
GADJAH MADA
PEMANFAATAN EKSTRAK KENIKIR (Cosmos sulphureus Cav.) SEBAGAI HERBISIDA NABATI UNTUK TEKI (Cyperus rotundus L.) PADA PERTANAMAN KEDELAI (Glycine max (L.) Merr.)
DYAH WENY RESPATIE, Prof. Dr. Ir. Prapto Yudono, M.Sc.; Dr. Ir. Aziz Purwantoro, M.Sc.; Prof. Ir. Y. Andi Trisyono
Universitas Gadjah Mada, 2019 | Diunduh dari http://etd.repository.ugm.ac.id/

Liliwirianis, N., N.L.W. Musa, W.Z.M.W. Zain, J. Kasim & S.A. Karim. 2011. Premilinary studies of phytochemical screening of ulam and fruit from Malaysia. E- J. Chem. 8: 285–288.

Lin, W.X., K.U. Kim & D.H. Shin. 2000. Rice allelopathic potential and its modes of action on Barnyard grass (*Echinochloa crus*-galli). Allelopath. J. 7: 215–224.

Liu, D.L. & J.V. Lovett. 1993. Biologically active secondary metabolites of barley. II. Phytotoxicity of barley allelochemicals. J. Chem. Ecol. 19: 2231–2244.

Liu, X.F. & X.J. Hu. 2001. Effects of allelochemical ferulic acid on endogenous hormone level of wheat seedling. Chin. J. Ecol. Agric. 9: 96–98.

Macias, F.A., R.M. Olivia, A.M. Simonet & J.C.G. Galindo. 1998. What are allelochemichals?. *In*: M. Olofsdother (Eds.). Allelopathy in rice. International Rice Research Institute. Manila, Philippines. 69–79 pp.

Macias, F.A., J.M.G. Molinillo, J.C.G. Galindo, R.M. Varela, R.M. Simonet & D. Castellano. 2001. The use of allelopathic studies in the search for natural herbicides. J. Crop Prod. 4: 237–255.

Macias, F.A., A. Oliveros-Bastidas, D. Marin, D. Castellano, A.M. Simonet & J.M. Molinillo. 2005b. Degradation studies on benzoxazinoids. Soil degradation dynamics of (2R)-2-O-beta-D-glucopyranosyl-4-hydroxy-(2H)- 1,4-benzoxazin-3(4H)-one (DIBOA-Glc) and its degradation products, phytotoxic allelochemicals from Gramineae. J. Agric. Food Chem. 53: 554–561.

Maiti, P.P., R.K. Bhakat & A. Bhattacharjee. 2008. Allelopathic effects of *Lantana camara* on physiobiochemical parameters of *Mimosa pudica* seeds. Allelopath. J. 22: 59–68.

Maiti, R., P. Satya & A. Ramaswamy. 2012. Crop Plant Anatomy. GPI Group. UK.

Marwat, K.B., M.A. Khan, A. Nawaz & A. Amin. 2008. *Parthenium hysterophorus* L. a potential source of bioherbicide. Pak. J. Bot. 40: 1933–1942.

Mas'ud, H. 2009. Sistem Hidroponik dengan Nutrisi dan Media Tanam Berbeda Terhadap Pertumbuhan dan Hasil Selada Media Litbang Sulteng 2: 131-136.

Matthews, S & A. Powell. 2006. Electrical conductivity vigour test: physiological basis and use. Seed Testing International (ISTA). 131: 32–35.

Mattice, J., T. Lavy, B. Skulman & R.H. Dilday. 1998. Searching for allelochemicals in rice control ducksalad. *In*: M. Olofsdotter. (Eds.). Allelopathy in rice. International Rice Research Institute. Manila, Philippines. 81–98 pp.

McDonald, M.B.Jr. & D.O. Wilson. 1979. An assessment of the standardizations and ability of the ASA-610 to rapid predict soybean germination. J. Seed Technol. 4: 1–12.

McLaughlin, J.C. & S.M. Smith. 1994. Metabolic regulation of glyoxylate-cycle enzyme synthesis in dethaced cucumber cothyledons and protoplast. Plant Physiol. Biochem. 33: 87–95.

UNIVERSITAS
GADJAH MADA
PEMANFAATAN EKSTRAK KENIKIR (Cosmos sulphureus Cav.) SEBAGAI HERBISIDA NABATI UNTUK TEKI (Cyperus rotundus L.) PADA PERTANAMAN KEDELAI (Glycine max (L.) Merr.)
DYAH WENY RESPATIE, Prof. Dr. Ir. Prapto Yudono, M.Sc.; Dr. Ir. Aziz Purwantoro, M.Sc.; Prof. Ir. Y. Andi Trisyono
Universitas Gadjah Mada, 2019 | Diunduh dari http://etd.repository.ugm.ac.id/

Meazza, G., B.E. Scheffler, M.R. Tellez, A.M. Rimando, J.G. Romagni & S.O. Duke. 2002. The inhibitory activity of natural products on plant p-hydroxyphenylpyruvate dioxygenase. Phytochemistry. 60: 281–288.

Mercado, B.L. 1979. Introduction to Weed Science. SEARCA. Philippines. 291 p.

Mersie W. & M. Singh. 1978. Allelopathic effects of parthenium *(Parthenium hysterophorus* L.*)* extract and residue on some agronomic crops and weeds*.* J. Chem. Ecol. 13: 1739–1747.

Michelet, B. & M. Bountry. 1995. The plasma membrane H^+-ATPase. A Highly regulated enzyme with multiply physiological functions. Plant Physiol. 108: 1–6.

Min, K., C. Freeman, H. Kang & S.U. Choi. 2015. The regulation by phenolic compounds of soil organic matter dynamics under a changing environment. Bio. Med. Res. Int. 1 – 11.

Moenandir, J. 1990. Pengantar Ilmu dan Pengendalian Gulma. Penerbit CV. Rajawali. Jakarta. 182 p.

Moenandir, J. & Ngadino. 1992. The effect of weed infestion on the critical period of bird pepper (*Capsicum frustescence*). *In*: Proceeding Joint Symposium on small Scale Vegetable Production and Horticultural Economics in Developing Countries. 332–338 pp.

Moenandir, J. 1993. Ilmu Gulma Dalam Sistem Pertanian. Raja Grafindo Persada. Jakarta. 159 p.

Molish, H. 1937. Der einflus einer pflanze auf die andere, allelopathie, (influence of one plant and another*,* 2001). Verlag von Gustav, Jena, Scientific Publishers. Jodhpur. Germany.

Morais, C.S.B., L.A.S. dos Santos & C.A.V. Rossetto. 2014. Oil radish development agronomic affected by sunflower plants reduces. Biosci. J. 30: 117–128.

Morrison, M.J., H.D. Voldeng & E.R. Cober. 1999. Physiological changes from 58 years of genetic improvement of short-season soybean cultivars in Canada. Agron. J. 91: 685–689.

Moud, A.M. & K. Maghsoudi. 2008. Salt stress effects on respiration and growth of germinated seeds of different wheat (*Triticum aestivum* L.) Cultivar. World J. Agric. Sci. 4: 351–358.

Możdżeń, K. & P. Repka. 2014. Allelopathic influence of aqueous extracts from the leaves of *Morus alba* L. on seed germination and seedling growth of *Cucumis sativus* L. and *Sinapsis alba*. Mod. Phytomorphol. 5: 93–99.

Muscolo, A., M.R. Panuccio & M. Sidara. 2001. The effect of phenols on respiratory enzymes in seed germination: respiratory enzyme activities during germination of *Pinus laricio* seeds treated with phenols extracted from different forest soils. Plant Growth Regul. 35: 31–35.

Namkeleja, H.S., M.T.C. Tarimo & P.A. Ndakidemi. 2014. Allelopathic effects of *Argemone mexicana* to growth of native plant species*.* Am. J. Plant Sci. 5: 1336–1344.

UNIVERSITAS
GADJAH MADA
PEMANFAATAN EKSTRAK KENIKIR (Cosmos sulphureus Cav.) SEBAGAI HERBISIDA NABATI UNTUK TEKI (Cyperus rotundus L.) PADA PERTANAMAN KEDELAI (Glycine max (L.) Merr.)
DYAH WENY RESPATIE, Prof. Dr. Ir. Prapto Yudono, M.Sc.; Dr. Ir. Aziz Purwantoro, M.Sc.; Prof. Ir. Y. Andi Trisyono
Universitas Gadjah Mada, 2019 | Diunduh dari http://etd.repository.ugm.ac.id/

Nelson, D.W. & L.E. Sommers. 1982. Total carbon, organic carbon and organic matter. *In*: A.L. Page, R.H. Miller & D.R. Keeny (Eds.). Methods of Soil Analysis, Part 2. Chemical and bilogical properties. Second Edition. Agronomy Monograph No.9. ASA Inc. and SSSA Inc. Madison, Wiconsin, USA. 539–580 pp.

Netsere, A. & E. Mendesil, 2011. Allelopathic effects of *Parthenium hysterophorus* L. aqueous extracts on soybean (*Glycine max* L.) and haricot bean (*Phaseolus vulgaris* L.) seed germination, shoot and root growth and dry matter production. J. Appl. Bot. Food Qual. 84: 219–222.

Nishida, N., S. Tamotsu, N. Nagata, C. Saito & A. Sakai. 2005. Allelopathic effects of volatile monoterpenoids produced by *Salvia leucophylla*: inhibition of cell proliferation and DNA synthesis in the root apical meristem of *Brassica campestris* seedlings. J. Chem. Ecol. 31: 1187–1203.

Nishimoto, R. 2001. Purple nutsedge tuber sprouting. Weed Biol. Manag. 1: 203–208.

Nobel, P.S. 1999. Plant Physiology, Physiochemistrical and Environment. 2nd Edition. Academic Press. New Sandiego.

Nurjanah, U. 2013. Kajian Alelokimia Kulit Buah Jengkol Pada Gulma Padi Sawah. Disertasi. Uiversitas Gadjah Mada. Yogyakarta. 231 p. Tidak dipublikasikan.

Oliveira, D.C, G.L.G. Soares & R.M. Santos Isaias. 2008. Phytotoxicity of the extracts of *Lonchocarpus muehlbergianus* Hassl. (Fabaceae) leaflets and galls on seed germination and early development of lettuce. Acta Bot. Bras. 22: 1095–1100.

Ormaetxe, I.I., R.E. Pedro, A.I. Cesar & B. Manuel. 1998. Oxidative damage in pea plants exposed to water deficit or paraquat. Plant Physiol. 116: 173–181.

Oyun, M.B. 2006. Allelopathic potentialities of *Gliricidia sepium* and *Acacia auriculiformis* on the germination and seedling vigour of maize (*Zea mays* L.). Am. J. Agric. Biol. Sci. 1: 44–47.

Palmgren, M.G. 2001. Plant plasma membran H^+ -ATPase: powerhouse for nutrient uptake. Annu. Rev. Plant. Mol. Biol. 52: 817 – 845.

Patterson, D.T. 1981. Effects of allelopathic chemicals on growth and physiological responses of soyabean (*Glycine max*). Weed Sci. 29: 309–326.

Pawlowski, A., E. Kaltchuk-Santos, C.A. Zini, E.B. Caramao & G.L.G. Soares. 2012. Essential oils of *Schinus terebinthifolius* and *S. molle* (anacardiaceae): mitodepressive and aneugenic inducers in onion and lettuce root meristems. S. Afr. J. Bot. 80: 96–103.

Politycka, B., M. Konzlowska & B. Mielcarz. 2004. Cell wall peroxidases in cucumber roots induced by phenolics allelochemicals. Allelopath. J. 13: 29–36.

Politycka, B. & J. Gmerek. 2008. Effect of ferulic and p-coumaric acids on the activity of hydrolytic enzymes and growth of radicals in germinating seeds of cucumber and pea. Allelopath. J. 21: 227–238.

UNIVERSITAS
GADJAH MADA
PEMANFAATAN EKSTRAK KENIKIR (Cosmos sulphureus Cav.) SEBAGAI HERBISIDA NABATI UNTUK TEKI (Cyperus rotundus L.) PADA PERTANAMAN KEDELAI (Glycine max (L.) Merr.)
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Universitas Gadjah Mada, 2019 | Diunduh dari http://etd.repository.ugm.ac.id/

Poonpaiboonpipat, T., U. Pangnakorn, U. Suvunnamek, M. Teerarak, P. Charoenying & C. Laosinwattana. 2013. Phytotoxic effects of essential oil from *Cymbopogon citratus* and its physiological mechanisms on barnyardgrass (*Echinochloa crus-galli).* Ind. Crop. Prod. 41: 403–407.

Pratt, D.E. 1992. Natural antioxidants from plant material. *In*: I.M.T. Huang, C.T. Ho & C.Y. Lee (Eds.). Phenolic compounds in food and their effects on health. American Chemical Society. New York.

Prihatman, K.. 2000. Kedelai (*Glycine max* L.). Sistem Informasi Manajemen Pembangunan di Pedesaan, Proyek PEMD, BAPPENAS. Jakarta.

Pujisiswanto, H. 2015. Mekanisme dan efektivitas asam asetat sebagai herbisida terhadap gulma pada kedelai. Disertasi. Uiversitas Gadjah Mada. Yogyakarta. 202 p. Tidak dipublikasikan.

Purwanto & T. Agustono. 2010. Kajian fisiologis tanaman kedelai pada berbagai kepadatan gulma teki dalam kondisi cekaman kekeringan. J. Agroland. 17: 85–90.

Putnam, A.R. & C.S. Tang. 1986. The Science of Allelopathy. John Wiley & Sons. New York. 43–56 pp.

Qasem, J.R. & C.L. Foy. 2001. Weed allelopathy, its ecological impacts and future prospects: a review. J. Crop. Prod. 4: 43–119.

Radjid, B.S. & R.D. Purwaningrahayu. 2007. Pengendalian Gulma pada Kedelai. Kedelai, Teknik Produksi dan Pengembangan. Puslitbang Tanaman Pangan. Bogor.I

Rafat, A., K. Philip & S. Muniandy. 2010. Antioxidant potential and phenolic content of ethanolic extract of selected Malaysian plants. Res. J. Biotechnol. 5: 16–19.

Rahayu, E.S. 2003. Peranan penelitian alelopati dalam pelaksanaan low external input and sustainable agriculture (LEISA). <http://www.rudyct.com/PPS 702-ipb/07134/enni_s_rahayu.htm> (diakses 31 Desember 2018).

Rahayuningsih, E., D. Wikansari & H. Setiawan. 2016. Natural colorants from *Cosmos sulphureus* Cav. and *Tagetes erecta* L.: extraction and characterization. AJChE. 16: 44–58.

Rahman, A.H.M.M., M.S. Alam, S.K. Khan, F. Ahmed, A.K.M.R. Islam & M.M. Rahman. 2008. Taxonomic studies on the family asteraceae (compositae) of the Rajshahi division. Res. J. Agric. Biol. Sci. 4: 134–140.

Rana, R.M., S.H. Khan, Z. Ali, A.I. Khan & I.A. Khan. 2011. Elucidation of thermotolerance diversity in cotton (*Gossypium hirsutum* L.) using physio-molecular approaches. Genet. Mol. Res. 10: 1156–1167.

Rauf, A.W. 2006. Alelopati tanaman padi pada sistem padi–kacangan. Disertasi. Universitas Gadjah Mada. Yogyakarta. 174 p. Tidak dipublikasikan.

Reigosa, M.J., X.C. Souto & L. Gonzales. 1999. Effect of phenolics compound on the germination of six weeds species. Plant Growth Regul. 28: 83–88.

Reigosa, M.S., L. Gonzalesy, X.C. Souto & J.E. Pastoriza. 2000. Allelopathy in forest ecosystem. In: Junaedi, A., M.A. Chozin, K.H. Kim. Perkembangan terkini kajian alelopati. J. Hayati. 13: 79–84.

UNIVERSITAS
GADJAH MADA
PEMANFAATAN EKSTRAK KENIKIR (Cosmos sulphureus Cav.) SEBAGAI HERBISIDA NABATI UNTUK TEKI (Cyperus rotundus L.) PADA PERTANAMAN KEDELAI (Glycine max (L.) Merr.)
DYAH WENY RESPATIE, Prof. Dr. Ir. Prapto Yudono, M.Sc.; Dr. Ir. Aziz Purwantoro, M.Sc.; Prof. Ir. Y. Andi Trisyono
Universitas Gadjah Mada, 2019 | Diunduh dari http://etd.repository.ugm.ac.id/

Reiss, C. 1993. Experiment in plant physiology: part I, plant biochemistry, determination of ascorbic acid content of cabbage. Pearson Publ. 292 p.

Rejekiningrum, P & E. Surmaini. 2014. Penentuan masa tanam berdasarkan indeks kecukupan air dan unsur dominan iklim penentu produksi kedelai di Jawa Timur. Prosiding Seminar Hasil Penelitian Tanaman Aneka Kacang dan Umbi. 316–326 pp.

Rice, E.L. 1984. Allelopathy. 2nd Edition. Acad. Press. Orlando. 353 p.

Rice, E.L. 1995. Biological Control of Weeds and Plant Diseases, Advances in Applied Allelopathy. Univ of Oklahoma Press. Norman Okla. 439 p.

Riskitavani, D.V. & K.P. Purwani. 2013. Studi potensi bioherbisida ekstrak daun ketapang (*Terminalia catappa*) terhadap gulma rumput teki (*Cyperus rotundus*). Jurnal Sains dan Seni Pomits. 2: 2337–3520.

Robinson, T. 1991. The organic constituents of higher plant. 6th Eds. (Kandungan organic tumbuhan tinggi). Diterjemahkan oleh Panduwinata K. 1995. ITB. Bandung.

Rodrigues, A.C. & M.E.M. Estelita. 2009. Morphoanatomy of the stem in Cyperaceae. Acta Bot. Bras. 23: 889–901.

Ross, C.W. 1974. Plant Physiology Laboratory Manual. Wadsworth. California. 200 p.

Ross, E.E. 1986. Percepts of succesfull seed storage. *In*: Mc. Donald M.B. & C.J. Nelson. (Eds.). Physiology of seed deterioration. CSSA Publ. Wisconsin. 11: 1–26.

Rodney, C., T.N. Kutchen & N.G. Lewis. 2000. Natural products (secondary metabolites). *In*: B. Buchanan, W. Gruissem & R. Jones (Eds.). Biochemistry & molecular biology of plants. Am. Soc. Plant Physiol. 1250–1318.

Rubatzky, N.G. & M. Yamaguchi. 1997. World Vegetable 1 : Principle, Production, and Nutritive Values (Sayuran Dunia 1 : Prinsip, Produksi dan Gizi alih bahasa Herison, C. & N. Nikosolihin). Institut Teknologi Bandung. Bandung.

Rungruang, N., S. Babel & P. Parkpian. 2011. Screening of potential hyoperaccumulator for cadmium from contaminated soil. Desalin. Water Treat. 32: 19–26.

Saito, X.C., L. Gonzalez & M.J. Reigosa. 2010. Root exudate *Desmodium uncinatum*. Phytochemistry. 7: 904–9080.

Salisburry, F.B. & C.W. Ross. 1995. Plant Physiology. (Fisiologis tumbuhan: biokimia tumbuhan). ITB. Bandung.

Sanchez, M., M.J. Peria, G. Revillia & I. Zarra. 1996. Changes in dehydrodiferulic acids and peroxidase activity againts ferulic acids associated with cells walls during growth of *Pinus pinaster* hypocotyl. Plant Physiol. 111: 941–946.

Santos, P.C., V.H.M. Santos, G.F. Mecina, A.R. Andrade, P.A. Fegueiredoa, V.M.O. Moraes, L.P. Silva & R.M.G. Silva. 2015. Phytotoxicity of *Tagetes erecta* L. and *Tagetes patula* L. on plant germination and growth. S. Afr. J. Bot. 100: 114–121.

UNIVERSITAS
GADJAH MADA
PEMANFAATAN EKSTRAK KENIKIR (Cosmos sulphureus Cav.) SEBAGAI HERBISIDA NABATI UNTUK TEKI (Cyperus rotundus L.) PADA PERTANAMAN KEDELAI (Glycine max (L.) Merr.)
DYAH WENY RESPATIE, Prof. Dr. Ir. Prapto Yudono, M.Sc.; Dr. Ir. Aziz Purwantoro, M.Sc.; Prof. Ir. Y. Andi Trisyono
Universitas Gadjah Mada, 2019 | Diunduh dari http://etd.repository.ugm.ac.id/

Saparso. 2008. Ekofisiologis tanaman kubis bawah naungan dan pemberian bahan pembenah tanah di lahan pasir pantai. Disertasi. Universitas Gadjah Mada. Yogyakarta. Tidak dipublikasikan.

Sarmin. 2011. Studi ekstrak daun kenikir sebagai green corrosion inhibitor pada baja karbon dalam larutan 0,5 m H_2SO_4. Universitas Indonesia. Depok.

Sangeetha, C. & P. Baskar. 2015. Allelopathy in weeed management: a critical review. Afr. J. Agric. Res. 10: 1004–1015.

Sastroutomo, S.S. 1990. Ekologi Gulma. Gramedia Pustaka Utama. Jakarta.

Saxena, S., K. Sharma, S. Kumar, N.K. Sand & P.B. Rao. 2003. Effect of weed extracts on uptake of P and Zn in wheat varieties. Allelopath. J. 11: 201–216.

Setyowati, N., U. Nurjannah & D.A. Togatorop. 2010. Allelopathic effect of *Wedelia trilobata, Ageratum conyoides, Chromolaena odorata* and *Micania micrantha* on green mustard growth. *In*: Y. Ramona, M. Pharmawati & Y. Ciawi (Eds.). Proc. Int. Conf on Biosci. and Biotechnol. Bali 23-24 September 2010.

Shafique, S, R. Bajwa & S. Shafique. 2011. *Tagetes erectus* L. – a potential resolution for management of *Parthenium hysterophorus* L. Pak. J. Bot. 43: 885–894.

Shimokoriyama, M. & S. Hattori. 1953. Anthochlor pigments of *Cosmos sulphureus*, *Coreopsis lanceolata* and *C. saxicola*. J. Am. Chem. Soc. 75: 1900–1904.

Siagian, W.M. 2012. Efektivitas pemberian kenikir (*Cosmos caudatus* Kunth), terhadap performa, organ limfoid dan profil darah ayam kampong (*Gallus gallus domesticus*). Departemen Ilmu Nutrisi dan Teknologi Pakan. Fakultas Peternakan Repository Institut Pertanian Bogor. 3–4 pp.

Singh, H.P., D.R. Batish & R.K. Kohli. 2003. Allelopathic interaction and allelochemicals: new possibilities for sustainable weed management. Crit. Rev. Plant. Sci. 22: 239–311.

Singh, A., D. Singh & N.B. Singh. 2009. Allelochemical stress produced by aqueous leachate of *Nicotiana plumbaginifolia* Viv. Plant Growth Regul. 58: 163–171.

Singh, P.K., R. Singh & S. Singh. 2013. Cinnamic acid induced changes in reactive oxygen species scavenging enzymes and protein profile in maize (Zea mays L.) plants grown under salt stress. Physiol. Mol. Biol. Plants. 19: 53–59.

Singleton, V., R. Orthofer & R. Lamuela-Ravento's. 1999. Analysis of total phenols and other oxidation substrates and antioxidants by means of folin ciocalteu reagent. *In*: L. Packer (Eds.). Oxidants and antioxidants, part A, methods in enzymology. Academic Press. New York. 152–178 pp.

Sitompul, S.M. & B. Guritno. 1995. Analisis Pertumbuhan Tanaman. Gadjah Mada University Press. Yogyakarta. 412 p.

Siquera, J.O., M.G. Nair, R. Hammerschmidt & G.R. Safir. 1991. Significance of phenolic compounds in plant-soil-microbial system. Crit. Rev. Plant Sci. 10: 63–69.

UNIVERSITAS
GADJAH MADA
PEMANFAATAN EKSTRAK KENIKIR (Cosmos sulphureus Cav.) SEBAGAI HERBISIDA NABATI UNTUK TEKI (Cyperus rotundus L.) PADA PERTANAMAN KEDELAI (Glycine max (L.) Merr.)
DYAH WENY RESPATIE, Prof. Dr. Ir. Prapto Yudono, M.Sc.; Dr. Ir. Aziz Purwantoro, M.Sc.; Prof. Ir. Y. Andi Trisyono
Universitas Gadjah Mada, 2019 | Diunduh dari http://etd.repository.ugm.ac.id/

Siregar, A.S., T.A. Siswoyo & B. Sukowardojo. 2013. Karakteristik perubahan protein biji melinjo (*Gnetum gnemon*) pada awal perkecambahan. Berkala Ilmiah Pertanian. 1: 22–24.

Soedarsan, A., W. Basuki, W. Soemantri & M.A. Rifai. 1985. Pedoman Pengenalan Jenis Gulma Penting pada Tanaman Perkebunan. Departemen Pertanian Direktorat Jendral Perkebunan. Jakarta.

Soerjani, M. & A.J.G.H. Kostermans. 1987. Weed of Rice in Indonesia. Balai Pustaka. Jakarta. 716 p.

Soltys D., U. Krasuska, R. Bogatek & A. Gniazdowska. 2013. Allelochemicals as bioherbicides — present and perspectives. *In*: A.J. Price & J.A. Kelto. Herbicides - current research and case studies in use. INTECH. 517–542 pp.

Souto, X.C., J.C. Bolano, L. Gonzalez & M.J. Reigoza. 2001. Allelopathic effects of tree species on some soil microbial populations and herbaceous plants. Biol. Plant. 44: 269–275.

Souza, M.C., C.L. do Amarat, H.H. Tozzi & P.L.C.A. Alves. 2013. Germination performance of yellow cosmos: understanding its invasion under tropical conditions. J. Agric. Sci. 5: 56–62.

Spencer, D.F. & G.G. Ksander. 1997. Dilute acetic acid exposure enhances electrolyte leakage by *Hidrylla verticillata* and *Potamogeton pectinatus* tubers. J. Aquat. Plant Manag. 37: 67–71.

Stamp, N. 2003. Out of the quagmire of plant defense hypotheses. Q. Rev. Biol. 78: 23–55.

Steenis, C.G.G.J. Van. 1987. Flora. Pradnya Paramita. Jakarta.

Sudarmadji, S., Haryono & B. Suhardi. 2007. Analisa Bahan Makanan dan Pertanian. Penerbit Liberty. Yogyakarta.

Sugiharti, W., Y.A. Trisyono, E. Martono & Witjaksono. 2018. Manfaat bunga *Turnera subulata* dan *Cosmos sulphureus* bagi kehidupan *Anagrus nilaparvata*e *(Hymenoptera: Mymaridae)*. JPTI. 22: 43–50.

Sukman & Yakub. 2002. Gulma dan Teknik Pengendaliannya. Raja Grafindo Persada. Jakarta.

Sulistiono, I., Sumardi & A. Purwantoro. 2012. Analisis profil protein pada tahap perkembangan buah kacang tanah (*Arachis hypogaea* (L.). Prosiding Seminar Nasional IX Pendidikan Biologi UNS.

Sumarno, F. Dauphin, A. Rahman, A. Sumarlin, Santoso, H. Kuntyastuti & Harnoto. 1989. Analisis Kesenjangan Hasil Kedelai di Jawa. Bogor. 71 p

Sunanto, W., H. Sudjadi & N.S. Mulyani. 1989. Penuntun Analisis Tanah dan Air. Pusat Penelitian Tanah. Bogor.

Sunkar, R. 2010. Plant Stres Tolerance: Methodes and Protocols. Departement of Biochemistry & Molecular Biology. Oklahoma State University. Springer Protocols. 273–280 pp.

Suparjo. 2010. Analisis bahan pakan secara kimiawi: analisis proksimat dan analisis serat. Fakultas Peternakan Universitas Jambi. Jambi

Sutopo, L. 2002. Teknologi Benih. PT Raja Grafindo Persada. Jakarta. 236 p.

UNIVERSITAS
GADJAH MADA
PEMANFAATAN EKSTRAK KENIKIR (Cosmos sulphureus Cav.) SEBAGAI HERBISIDA NABATI UNTUK TEKI (Cyperus rotundus L.) PADA PERTANAMAN KEDELAI (Glycine max (L.) Merr.)
DYAH WENY RESPATIE, Prof. Dr. Ir. Prapto Yudono, M.Sc.; Dr. Ir. Aziz Purwantoro, M.Sc.; Prof. Ir. Y. Andi Trisyono
Universitas Gadjah Mada, 2019 | Diunduh dari http://etd.repository.ugm.ac.id/

Syarifi, P., R. Amirnia, E. Majidi, H. Hadi, M. Roustaii, M. Nakhoda, H.M. Alipoor & F. Moradi. 2012. Relationship between drought stress and some antioxidant enzimes with cell membrane and chlorophyll stability in wheat lines. Afr. J. Microbiol. Res. 6: 617–23.

Takatani, S., T. Hirayama, T. Hashimoto, T. Takahashi & H. Motose. 2015. Abscisic acid induces ectopic outgrowth in epidermal cells through cortical microtubule reorganization in *Arabidopsis thaliana*. Nature. 5: 1–12.

Taiz, L. & E. Zeger. 1991. Plant Physiology. Benyamin/Cumming Publishing Company Inc. Publishers. Tokyo. 219–247 pp.

Taiz, L. & E. Zeger. 2002. Plant Physiology. 3rd Edition. Sinauer Associates, Inc. Publishers. Massachusets.

Tawaha, A.M. & M.A. Turk. 2003. Allelopathic effects of black mustard (*Brassica nigra*) on germination and growth of wild barley (*Hordeum spontaneum*). J. Agron. Crop Sci. 189: 298–303.

Teasdale, J.R. 2003. Principles and practices of using cover crops in weed management system. *In*: Labrada (Eds.). Weed management for developing countries. FAO Plant Production and Protection Paper. 169–178 pp.

Teerarak, M., P. Charoenying & C. Laosinwattana. 2012. Physiological and cellular mechanisms of natural herbicide resource from *Aglaia odorata* Lour. on bioassay plants. Acta Physiol. Plant. 34: 1277–1285.

Tereschuk, M.L., M.V. Riera, G.R. Castro & L.R. Abdala. 1997. Antimicrobial activity of flavonoids from leaves of *Tagetes minuta*. J. Ethnopharmacol. 56: 227–232.

Tilay, A., M. Bule, J. Kishenkumar & U. Anapure. 2008. Preparation of ferulic acid from agricultural wastes: its improved extraction and purification. J. Agric. Food Chem. 56: 7644–7648.

Tjitrosoedirjo, S. Utomo & J. Wiroatmojo. 1984. Pengelolaan Gulma di Perkebunan. Gramedia. Jakarta.

Togatorop, D.A., N. Setyowati & U. Nurjannah. 2010. Studi alelopati *Wedelia triloba*, *Ageratum conyzoides*, *Chromolaena odorata* dan *Mikania micrantha* terhadap pertumbuhan dan hasil sawi. *In*: Marwanto, Hermansyah & N. Setyowati (Eds.). Pros. Sem. Nas. dan Rapat Tahunan Dekan Bidang Ilmu-Ilmu Pertanian. Bengkulu 23 – 25 Mei 2010.

Tomova, B.S., J.S. Waterhouse & J. Doberski. 2005. The effect of fractionated *Tagetesoil volatiles* on aphid production. Entomol. Exp. Appl. 115: 153–159.

Treber, I., R. Balicevic & M. Ravlic. 2015. Assessment of allelopathic effect of pale persicaria on two soybean cultivars. Herbologia. 15: 31–35.

Venkateshwarlu, G. & V. Ravindra. 2001. Mangiferin: An allelopathin from mango (*Mangifera indica* L.) leaves. Allelopath. J. 8: 221–224.

Vasudevan, P., S. Kashyap & S. Sharma. 1997. Tagetes: a multipurpose plant. Biosci. Technol. 62: 29–35.

UNIVERSITAS
GADJAH MADA
PEMANFAATAN EKSTRAK KENIKIR (Cosmos sulphureus Cav.) SEBAGAI HERBISIDA NABATI UNTUK TEKI (Cyperus rotundus L.) PADA PERTANAMAN KEDELAI (Glycine max (L.) Merr.)
DYAH WENY RESPATIE, Prof. Dr. Ir. Prapto Yudono, M.Sc.; Dr. Ir. Aziz Purwantoro, M.Sc.; Prof. Ir. Y. Andi Trisyono
Universitas Gadjah Mada, 2019 | Diunduh dari http://etd.repository.ugm.ac.id/

Verma, M. & P.B. Rao. 2006. Allelopathic effect of four weed species extracts on germination, growth and protein in different varieties of *Glycine max* (L.) Merrill. J. Environ. Biol. 27: 571–577.

Verma, N. & S. Sukhla. 2015. Impact of various factors responsible for fluctuation in plant secondary metabolites. J. Appl. Res. Med. Aroma. Plants. 2: 105–113.

Wakjira, M., G. Berecha & B. Bulti. 2005. Allelopathic effects of *Parthenium hysterophorus* extracts on seed germination and seedling growth of lettuce. Trop. Sci. 45: 159–162.

Wang, C.M., H.T. Chen, T.C. Li, J.H. Weng, Y.L. Jhan & S.X. Lin. 2014. The role of pentacyclic triterpenoids in the allelopathic effects of *Alstonia scholaris.* J. Chem. Ecol. 40: 90–98.

Wardhani, D., K.S. Darmanti & R. Budhiastuti. 2018. Allelochemical effect of *Ageratum conyzoides* L. leaf extract on Soybean [*Glycine max* (L.) Merr. Cv Grobogan] growth. J. Physics.: Conf. Ser. 1025: 1–8.

Wat, C.K., T. Johns & G.H.N. 1980. Phototoxic effects and antibiotic activities of plants of the Asteraceae used in folk medicine. J. EthnopharmocoL. 2: 279–283.

Weir, T.L., S.W. Park & J.M. Vivanco. 2004. Biochemical and physiological mechanisms mediated by allelochemicals. Curr. Opin. Plant Biol. 7: 472–479.

Wichittrakarn, P. 2015. Allelopathic Potential of *Tagetes erecta* L.; Its Partially Separation of Active Compounds and Its Mechanism on Seed Germination on *Echinochloa Crus-galli* (L.) Beauv. SICBENS-855.

Widyatama, C.E., Tohari & R. Rogomulyo. 2012. Periode kritis kedelai hitam (*Glycine max* (L.) Merill) terhadap gulma. Veg. 1: 32–41.

Wiryanta, B.T.W. 2002. Bertanam Cabai Pada Musim Hujan. Agromedia Pustaka. Jakarta

Wu, F.Z., K. Pan, F.M. Ma & X.D. Wang. 2004. Effects of ciunamic acid on photosynthesis and cell ultrastructure of cucumber seedlings. Acta Hortic. Sin. 31: 183–188.

Wu, Z., L. Yang, R. Wang, Y. Zhang, Q. Shang & L. Wang. 2015. In vitro study of the growth, development and pathogenicity responses of *Fusarium oxysporum* to phthalic acid, an autotoxin from Lanzhou lily. World J. Microbiol. Biotechnol. 31: 1227–1234.

Xuan, T.D., S. Tawata, N.H. Hong, T.D. Khanh & I.M. Chung. 2004. Assesment of phytotoxcic action of *Ageartum conyzoides* L. on weeds. Crop. Prot. 23: 335–345.

Yang, G.Q., F.H. Wan, W.X. Liu & J.Y. Guo. 2008. Influence of two allelochemicals from *Ageratina adenophora* Sprengel on ABA, IAA, and ZR contents in roots of upland rice seedlings. Allelopath. J. 21: 253–262.

Yang, C.M., I.F. Chang, S.J. Lin & C.H. Chou. 2004. Effects of three allelopathic phenolics on chlorophyll accumulation of rice (*Oryza sativa*) seedlings: II. stimulation of consumption-orientation. Bot. Bull. Acad. Sin. 45: 119–125.

UNIVERSITAS
GADJAH MADA
PEMANFAATAN EKSTRAK KENIKIR (Cosmos sulphureus Cav.) SEBAGAI HERBISIDA NABATI UNTUK TEKI (Cyperus rotundus L.) PADA PERTANAMAN KEDELAI (Glycine max (L.) Merr.)
DYAH WENY RESPATIE, Prof. Dr. Ir. Prapto Yudono, M.Sc.; Dr. Ir. Aziz Purwantoro, M.Sc.; Prof. Ir. Y. Andi Trisyono
Universitas Gadjah Mada, 2019 | Diunduh dari http://etd.repository.ugm.ac.id/

Yang, Q.H., W.H. Ye, F.L. Liao & X.J. Yin. 2005. Effects of allelochemicals on seed germination. Chin. J. Ecol. 24: 1459–1465.

Youwei, Z., Z. Jinlian & P. Yonghong. 2008. A comparative study on the free radical scavenging activities of some fresh flowers in southern China. LWT – Food Sci. Technol. 41: 1586–1591.

Yoshida, S. 1981. Fundamental of Rice Crop Science. International Rice Research Institute. Los Banos, Philippines.

Yudono, P. 2012. Perbenihan Tanaman, Dasar Ilmu, Teknologi dan Pengelolaan. Gadjah Mada University Press. Yogyakarta. 308 p.

Yu, J.Q. & Y. Matsui. 1997. Effects of root exudates of cucumber (*Cucumis sativus*) and allelochemicals on ion uptake by cucumber seedlings. J. Chem. Ecol. 23: 817–827.

Yu, J.Q., S.F. Ye, M.F. Zhang & W.H. Hu. 2003. Effects of root exudates and aqueous root extracts of cucumber (*Cucumis sativus*) and allelochemicals, on photosynthesis and antioxidant enzymes in cucumber. Biochem. Syst. Ecol. 31: 129–139.

Yu, J.H., Y. Zhang, C.X. Niu & J.J. Li. 2006. Effects of two kinds of allelochemicals on photosynthesis and chlorophyll fluorescence parameters of *Solanum melongena* L. seedlings. Chin. J. Appl. Ecol. 17: 1629–1632.

Yuan, B.Z., M.J. Miller, C.L. Keck, D.B. Zimonjic, S.S. Thorgeirsson & N.C. Popescu.1998. Cloning, characterization, and chromosomal localization of a gene frequently deleted in human liver cancer (DLC-1) homologous to rat RhoGAP. Cancer Res. 58: 2196–2199.

Zadeh, H.G., S. Lorzadeh & N. Aryannia. 2011. Evaluation weed competitive ability in a corn field in southern west of Iran. Asian J. Crop Sci. 3: 179–197.

Zeng, R.S., S.M. Luo, Y.H. Shi, M.B. Shi & C.Y. Tu. 2001. Physiological and biochemichal mechanism of allelopathy of secalonic acid f on higher plants. Agron. J. 93: 72–79.

Zhou, Y.H. & J.Q. Yu. 2006. Allelochemicals and Photosynthesis. *In*: Reigosa, M.J., N. Pedrol & L. González. (Eds). Allelopathy: A Physiological Process with Ecological Implications. Springer. Netherlands. 27- 139 pp.

Zimdahl, R.L. 1980. Weed Crop Competition. A review. The I.P.P.C. Oregon, USA. 195 p.

Zimdahl, R.L. 2007. Fundamentals of Weed Science. Academic Press Elsevier. London.

Zuo, S.P., G.B. Liu & M. Li. 2012a. Genetic basis of allelopathic potential of winter wheat based on the perspective of quantitative trait locus. Field Crop Res. 135: 67–73.

Zuo, S.P., Y.Q. Ma & L.T. Ye. 2012b. In vitro assessment of allelopathic effects of wheat on potato. Allelopath. J. 30: 1–10.

Zuo, S.P., X.W. Li, Y.Q. Ma & S.Y. Yang. 2014. Soil microbes are linked to the allelopathic potential of different wheat genotypes. Plant Soil. 378: 49–58.