CURRICULUM VITAE

A. BUTIR-BUTIR PERIBADI ***(Personal Details)***			
Nama Penuh *(Full Name)*	RADZIAH OTHMAN		Gelaran *(Title):* Prof. Madya
No. MyKad / No. Pasport *(Mykad No. / Passport No.)* 590520-02-5010	Warganegara *(Citizenship)* Malaysia	Bangsa *(Race)* Melayu	Jantina *(Gender)* Perempuan
Jawatan *(Designation)*	Pensyarah	Tarikh Lahir *(Date of Birth)*	20hb Mei 1959

Alamat Semasa *(Current Address)*	Jabatan/Fakulti *(Department/Faculty)*	E-mel dan URL *(E-mail Address and URL)*
	Jabatan Pengurusan Tanah, Fakulti Pertanian, Universiti Putra Malaysia, 43400 UPM Serdang, Selangor Tel: 03-89474924 Fax: 03-89408316	E-mail: radziah@upm.edu.my URL: upm.edu.my

B. KELAYAKAN AKADEMIK ***(Academic Qualification)***			
Nama Sijil / Kelayakan *(Certificate / Qualification obtained)*	Nama Sekolah Institusi *(Name of School / Institution)*	Tahun *(Year obtained)*	Bidang pengkhususuan *(Area of Specialization)*
B.Sc	Indiana University, Bloomington, USA	1982	Microbiology
M.Sc.	North Carolina State University, USA	1985	Soil Science
Ph.D.	Universiti PUtra Malaysia	1996	Soil Microbiology

C. KEMAHIRAN BAHASA *(Language Proficiency)*					
Bahasa / *Language*	Lemah *Poor (1)*	Sederhana *Moderate (2)*	Baik *Good (3)*	Amat Baik *Very good (4)*	Cemerlang *Excellent (5)*
English					✓
Bahasa Melayu					✓
Chinese					
Lain-lain *(other):*					

D. PENGALAMAN SAINTIFIK DAN PENGKHUSUSAN
(Scientific experience and Specialisation)

Organization	*Position*	*Start Date*	*End Date*	*Expertise*
Universiti Putra Malaysia	Lecturer	1985	To date	Soil Microbiologist

E. PEKERJAAN *(Employment)*

Majikan / *Employer*	Jawatan / *Designation*	Jabatan / *Department*	Tarikh lantikan / *Start Date*	Tarikh tamat / *Date Ended*
Universiti Putra Malaysia	Pensyarah	Jab. Pengurusan Tanah	1985	-

F. ANUGERAH DAN HADIAH *(Honours and Awards)*

Name of awards	*Title*	*Award Authority*	*Award Type*	*Year*
Academic Awards				
Non-Academic Awards	1.Invention &Research Exhibition	UPM	Bronze medal	2002
	2. Invention, Research & Innovation	UPM	Silver medal	2005
	3. Invention & Innovation, Malaysian Technology Expo	MOSTI	Bronze medal	2006
	4.Invention, Research & Innovasion Exhibition	UPM	Silver medal	2009
	5.Research and Innovation Exhibition	UPM	Gold medal	2011
Awards of Merit	Excellent service	UPM	Certificate	2006
	Excellent service	Faculty of Agriculture	Certificate	2003, 2005
	Excellent service	UPM	Certificate	2009 (15 Julai 2010)

G. SENARAI PENERBITAN (Sila masukan nama pengarang, tajuk, nama jurnal, jilid, muka surat dan tahun diterbitkan) *(List of publications – author (s), title, journal, volume, page and year published)*

Journal	**1.** Garba J., Samsuri AW, Ahmad-Hamdani S. and Othman R. 2017. Carbon and Phosphorus Mineralization from soils amended with cow dung or rice husk ash. J. Environ and Agricultural Sciences. 10:84-94. **2.** Khunaw A.R., **Othman R**., Syed Ali N., Musa M.H. and Rabara F.S. 2017. Role of microbial community in suppressing development of *Ganoderma* in oil palm seedlings. Int. J. Plant & Soil, 19(1): **3.** Panhwar Q.A., Naher U.A. **Othman R**., Shamshuddin J., Hakeem K.R. Ismail M.R. and Ariffin N. 2017. Aluminium toxicity-induced alterations in the leaf proteome of rice contrasting response towards inoculation of plant growth-promoting bacteria. Acta Physiol Plant, 39:214. DOI 10.1007/s11738-017-2498-2. **4.** Awla H.K., Kadir J., **Othman R**., Rashid T.S., Hamid S. Wong M.Y. 2017. Plant growth- promoting abilities and biocontrol efficiency of *Streptomyces* sp. UPMRS4 against *Pyricularia oryzae*. 2017. Biological Control , 112:55-63. **5.** Nur Maizatul Idayu O., **Radziah O**., Halimi M.S. and Puteri Edaroyati M.W. 2017. Inoculation of Zinc-solubilizing bacteria with different zinc sources and rates for improved growth and zinc uptake in rice. Int. J. Agric. Biol., 19: 1137-1140. **6.** Nur Maizatul Idayu O., **Radziah O**., Halimi M.S. and Puteri Edaroyati M.W. 2017. Efficiency of zinc-solubilizing bacteria for in vitro zinc solubilization and its effects on IAA rice production. Bangladesh J. Bot., 46(1): 511-516. **7.** Laili N.S., **Radziah O**. and Zaharah S.S. 2017. Isolation and characterization of plant growth-promoting rhizobacteria (PGPR) and their effects on growth of strawberry (*Fragaria ananassa* Duch.). Bangladesh J. Bot. 46(1): 277-282. **8.** Siti Nur'Ain S., **Radziah O**. and Khanif Y.M. 2017. Effects of iron and molybdenum dual inoculation of nitrogen fixing bacteria and phosphate solubilizing bacteria on growth of aerobic rice. Bangladesh J. Bot. 46(1): 497-501. **9.** Hidayah N.H., **Radziah O**., and Razi M.I. 2017. Growth performance of *Stenotrophomonas maltophilia* (Sb16) in different culture media. Bangladesh J. Bot. 46(1): 271-275. **10.** Uddin M.K., Juraimi A.S., **Radziah O**. and Anwar M.P. 2017. Effects of sea water and herbicide for salt tolerant weed management in turfgrass. Bangladesh J. Bot. 46(1): 503-510. **11.** Uddin M.K., Juraimi A.S., **Radziah O**., Shamsuzzaman S.M. and Anwar M.P. 2017. Sedge weeds control in tropical turf using sea water. . Bangladesh J. Bot. 46(1):795-798. **12.** Mahfuzah N.A., Khanif Y.M., **Radziah O**. and Khairuddin A.R. 2017. Timing of nitrogen uptake pattern by maize using ^{15}N isotope technique at different growth stages. Bangladesh J. Bot. 46(1): 320-334. **13.** Ali-Tan K.Z., **Radziah O**., Halimi M.S. Abdul Rahim K.B., Abdullah M.Z. and Shamsuddin Z.H. 2017. Growth and yield responses of rice cv MR219 to rhizobial and plant growth-promoting rhizobacterial inoculations under different fertilizer-N rates. Bangladesh J. Bot. 46(1): 481-488. **14.** Balouei F., Jaafar H.Z.E., Khalatbari A.M., Aslam F. and **Othman R**. 2017. Response of N_2-fixing activity in soybean (*Glycine max* (L.) Merr.) inoculated with plant growth-promoting rhizobacteria to water deficit. 2017. Bangladesh J. Bot. 46(1): 317-321. **15.** Balouei F., Jaafar H.Z.E., Khalatbari A.M., Aslam F. and **Othman R**. 2017. Rhizobateria acts as bioenhancer for growth of soybean (*Glycine max* (L.) Merr.) under growth chamber condition. Bangladesh J. Bot. 46(1): 311-316. **16.** Shamshuddin J., Q.A. Panhwar, F.J. Alia, M.RA.R.S. Shazana, **O. Radziah** and C.I. Fauziah. 2017. Formation and utilization of acid sulfate soils in Southeast Asia for sustainable rice cultivation. Pertanika J. Trop. Agric. Sci. 40(2):225-246. **17.** Parvin W., Radziah O., Jaafar H.Z.E, Rahman M. and Wong M.Y. 2016.

	Detection of Phenazines from UPMP3 strain *Pseudomonas aeruginosa* and its antagonistic effects against *Ganoderma boninense*. Int. J. Agric. Biol. 18:483-488. **18.** Awla H.K. Kadir J., Othman R., Rashid T.S. and Wong M.Y. 2016. Bioactive compounds produced by Streptomyces sp. Isolated UPMRS4 and antifungal activity against Pyricularia oryzae. American Journal of Plant Sciences, 7:1077-1085. **19.** Balouei F., Jaafar H.Z.E., Khalatbari A.M., **Othman R**. Ibrahim M. Elmahdi S. and Abdullah N. 2016. The response and recovery of N_2-fixation activity in soybean (*Glycine max*) inoculated with PGPR to water deficit at onset of pod and onset of seed stages. Int. J. Advanced Biotechnology and Research 17(3): 1309-1321. **20.** Nahi A., **Othman R**. and Omar D. 2016. Effects of Sb16 bacterial strain and herbicides on endophytic bacterial populations and growth of aerobic rice. Plant Soil Environ. 62(10):453-459.
Books/Monographs	1. Shamshuddin J., Radziah O., Mohamad O., Karam Singh D.S., Mohd Yusoff A.B. and Mohd Risal A. 2016. Bauxide Mining in Pengerang. UPM Press, Serdang. 2. Shamshuddin J. Radziah O, Fauziah C.I., Norsida M., Nur Lyana F.O. and Mohd Fesol M.F. 2015. Penanaman Padi di Atas Tanah Asid Sulfat Secara kestari. UPM Press, Serdang. 3. Panhwar Q.A., **Radziah O**. and Naher U.A. 2014. Role of Phosphate-Solubilizing Bacteria on the growth of Aerobic Rice. Lambert Academic Publishing, Duetschland. 4. Naher U.A. and **Othman R**. 2012. Root Exudates on Specific Diazotroph-Rice Genotype Association. Lambert Academic Publishing
Chapter in book	1. Panhwar, Q. A, U.A. Naher, J. Shamshuddin, O. Radziah and K.R. Hakeem. 2016. Management of Acid Sulfate Soils for sustainable rice cultivation in Malaysia. "Soil Science: Agricultural and Environmental Prospectives". Khalid Ul Rehman Hakeem, Javaid Akhtar and Muhammad Sabir (Editors). Springer International, Switzerland. 2016, pp. 91-104. 2. Shamshuddin, J., O. Radziah and I. Roslan. 2016. Was the 2014 great flood in Kelantan, Malaysia, the wrath of nature? LA SAGESSE. W. Noor Inayah, A.H. Mohamad, M.N. Mohd Khalid and A.M.A. Algeriani (eds.). Malaysian Islamic University. 2: 135-144. 3. Naher U.A., A.L. Shah, M.U. Sarkar, SM Mofijul Islam, M.N. Ahmed, Q.A. Panhwar and R. Othman. 2015. Fertilizer Consumption Scenario and Rice Production in Bangladesh. In Advances in Tropical Soil Science, Vol. 3. Hamdan Jol and Shamshuddin Jusop (eds). Universiti Putra Malaysia Press, pp. 81-89. 4. Naher U.A., R. Othman, Q.A. Panhwar and M.R. Ismail. 2015. Biofetilizer for sustainable rice production and reduction of environmental pollution. In Crop Production and Global Environmental Issues. Khalid Rehman Hakeem (eds). Springer, pp.283-292. 5. Radziah O. and Panhwar Q.A. 2014. Phosphate-Solubilizing Bacteria Improves Nutrient Uptake in Aerobic Rice. In Phosphate Solubilizing Microorganisms, Principles and Application of Microphos Technology. Ed. M.S. Khan, A. Zaidi and J. Musarrat, Springer, Switzerland, pp.207-223. 6. Mohd Fauzihan Karim, Radziah Othman, Umme Aminun Naher, A'fifah Abdul Razak and Halimi Mohd Saud. 2013. Biofortification of Chilli Using Beneficial Microbes and EFB Compost at Two Moisture Levels. In Advance in Tropical Soil Science. Vol. 2. Ed. Hamdan Jol and Shamshuddin Jusop. Univerisiti Putra Malaysia Press, Serdang, 229-244. 7. Umme Aminun Naher, Radziah Othman and Qurban Ali Panhwar. 2013. Biofetilizer for Improved Plant growth and Soil Fetility. In Advance in Tropical Soil Science. Vol. 2. Ed. Hamdan Jol and Shamshuddin Jusop. Univerisiti Putra

	Malaysia Press, Serdang, pp.245-262. 8. Bahi Jalili Seh-Bardan, Radziah Othman, Samsuri Abd Wahid. Aminudin Husin and Fardin Sadegh-Zadeh. 2013. Fungal ioleaching of heavy metals from mine tailings. In Advance in Tropical Soil Science. Vol. 2. Ed. Hamdan Jol and Shamshuddin Jusop. Univerisiti Putra Malaysia Press, Serdang, pp. 215-228. 9. Qurban Ali Panhwar, Shamshuddin Jusop, Umme Aminun Naher and Radziah Othman. 2013. Phosphate solubilization mechanisms in soil by phosphate-solubilizing bacteria. In Advance in Tropical Soil Science. Vol. 2. Ed. Hamdan Jol and Shamshuddin Jusop. Univerisiti Putra Malaysia Press, Serdang, pp. 149-168. 10. Radziah O, Naher UA, Panhwar QA and Asilah AM. 2011. Efficiency of microbes as nitrogen and phosphorus biofertilizer in rice cultivation. In Advance in Tropical Soil Science. Vol. 1. Ed. Hamdan Jol and Shamshuddin Jusop. Univerisiti Putra Malaysia Press, Serdang, pp.207-233. 11. Zulkifli Hj Shamsuddin, O. Radziah and Halimi Mohd Saud. 2009. Beneficial microbes in sustainable Tropical Crop Production. In Phosphate Solubilizing Microbes for Crop Improvement. Ed. M. S. Khan and A. Zaidi, Nova Sci, Publishers, New York, pp. 161-197.
Proceedings	1. Shamshuddin, J., F.J. Alia, Q.A. Panhwar, **O. Radziah** and C.I. Fauziah. 2015. Acid sulfate soils in Southeast Asia and their utilization for rice cultivation. Proc. 9th International Symposium on Plant-Spil Interaction at Low pH. Dubrovnik, Croatia, October 18-23, 2015. pp: 156-157. 2. **Radziah, O**., Q.A. Panhwar, U.A. Naher and J. Shamshuddn. 2015. Amelioration of aluminum toxicity for rice cultivation in and acid sulfate soil using plant-growth promoting bacteria, ground magnesium limestone and basalt. Proc. 9th International Symposium on Plant-Soil Interaction at Low pH. Dubrovnik, Croatia, October 18-23, 2015. pp: 132-133. 3. Panhwar Q.A., U.M. Naher, **Radziah Othman**, J. Shamshuddin and Mohd Razi Ismail. 2015. Effects of micronutriens application on the rice quality and antioxidant activities. In Proceedings Soil Science Conference of Malaysia. Soil Security for Sustainable Food Production. Eds. Che Fauziah Ishak, Christopher Teh Boon Sung, Mohamed Hanafi Musa, Rosazlin Abdullah, Rosenani Abu Bakar, Shamshuddin Jusop, Qurban Ali Panhwar and Wan Rasidah Kadir. April 7-9 2015, Putrajaya, pp. 68-71. 4. Pupathy U.T. J. Nasir, M.H.A. Husni, **Radziah Othman**. 2015. Effects of nitrogen-fixing bacteria derived from EFB compost on growth and nutrient uptake of corn. In Proceedings Soil Science Conference of Malaysia. Soil Security for Sustainable Food Production. Eds. Che Fauziah Ishak, Christopher Teh Boon Sung, Mohamed Hanafi Musa, Rosazlin Abdullah, Rosenani Abu Bakar, Shamshuddin Jusop, Qurban Ali Panhwar and Wan Rasidah Kadir. April 7-9 2015, Putrajaya, pp. 83-86. 5. Nur Lyana Farhan Oslan, J. Shamshuddin and **Radziah Othman**. 2015. Effects of basalt and/or biofertilizer application on the chemical properties of an acid sulphate soil and the growth of rice. In Proceedings Soil Science Conference of Malaysia. Soil Security for Sustainable Food Production. Eds. Che Fauziah Ishak, Christopher Teh Boon Sung, Mohamed Hanafi Musa, Rosazlin Abdullah, Rosenani Abu Bakar, Shamshuddin Jusop, Qurban Ali Panhwar and Wan Rasidah Kadir. April 7-9 2015, Putrajaya, pp. 145-147. 6. Siti Nur' Ain Sambuddin, **Radziah Othman** and Mohd Khanif Yusop. 2015. Effect of iron and molybdenum on growth of rice inoculated with phosphate solubilizing bacteria. In Proceedings Soil Science Conference of Malaysia. Soil Security for Sustainable Food Production. Eds. Che Fauziah Ishak, Christopher Teh Boon Sung, Mohamed Hanafi Musa, Rosazlin Abdullah, Rosenani Abu Bakar, Shamshuddin Jusop, Qurban Ali Panhwar and Wan Rasidah Kadir. April 7-9 2015, Putrajaya, pp.249-

252.

7. Melissa Alina Yusoff, **Radziah Othman**, Q.A. Panhwar and J. Shamshuddin. 2015. Effect of arbusclar mycorrhiza and plant growth-promoting rhizobacteria on growth and nutrient uptake of selected upland rice varieties. In Proceedings Soil Science Conference of Malaysia. Soil Security for Sustainable Food Production. Eds. Che Fauziah Ishak, Christopher Teh Boon Sung, Mohamed Hanafi Musa, Rosazlin Abdullah, Rosenani Abu Bakar, Shamshuddin Jusop, Qurban Ali Panhwar and Wan Rasidah Kadir. April 7-9 2015, Putrajaya, pp. 291-295.
8. Fahmi Mohd Fessol, **Radziah Othman** and J. Shamshuddin. 2015. Improved tolerance of rice seedlings to acid sulphate soil through inoculation with plant growth-promoting rhizobacteria. In Proceedings Soil Science Conference of Malaysia. Soil Security for Sustainable Food Production. Eds. Che Fauziah Ishak, Christopher Teh Boon Sung, Mohamed Hanafi Musa, Rosazlin Abdullah, Rosenani Abu Bakar, Shamshuddin Jusop, Qurban Ali Panhwar and Wan Rasidah Kadir. April 7-9 2015, Putrajaya, pp. 300-302.
9. Zahidah, A.R., A. B. Rosenani, S.H. Ahmad and **O. Radziah**. 2015. Soil chemical properties, biomass yield and nutrient uptake of *Phyllanthus niruri* as influenced by organic soil amendment. In Proceedings Soil Science Conference of Malaysia. Soil Security for Sustainable Food Production. Eds. Che Fauziah Ishak, Christopher Teh Boon Sung, Mohamed Hanafi Musa, Rosazlin Abdullah, Rosenani Abu Bakar, Shamshuddin Jusop, Qurban Ali Panhwar and Wan Rasidah Kadir. April 7-9 2015, Putrajaya, pp. 303-307.
10. Hidayah N.H., **O. Radziah** and M.R. Ismail. 2015. Effect of molasses on carbohydrate accumulation in rice plant inoculated with N-fixing bacteria. In Proceedings Soil Science Conference of Malaysia. Soil Security for Sustainable Food Production. Eds. Che Fauziah Ishak, Christopher Teh Boon Sung, Mohamed Hanafi Musa, Rosazlin Abdullah, Rosenani Abu Bakar, Shamshuddin Jusop, Qurban Ali Panhwar and Wan Rasidah Kadir. April 7-9 2015, Putrajaya, pp.328-331.
11. Alireza S., Y.B. Awang, A.S. Juraimi and **R. Othman**. 2013. Growth and physiological responses of 'Persian Lime' and 'Mayer Lemon' to salinity stress. Proc., 2nd Int. Symp. On Underutilized Plant Species "Crops for the Future-Beyond Food Security", Eds. F. Massawe et al. Acta Hort. 979, ISHS 2013, pp.755-761.
12. **Radziah O**. and Naher U.A. 2012. Exploiting mycorrhizal fungi for sustainable crop production in Malaysia. In Proc. Soil Science Conference of Malaysia 2012; Soil Quality Towards Sustainable Agriculture Production. Wan Rasidah Kadir, Rosazlin Abdullah, Ahmed Osumanu Haruna, Mohamad Fakhri Ishak, Che Fauziah Ishak, Zulkefli Malik Aminah Hamzah, Rozita Ahmad and Jeyanny Vijayanathan (eds), 10-12 April 2012, Kota Bharu, Kelantan, pp. 60-67.
13. Nazurah S.M.K. Fauziah C.I. and **Radziah O**. 2012. Bioaccumulation of Cu by Bacillus sp. MR7 isolated from Cu contaminated soil. In Proc. Soil Science Conference of Malaysia 2012; Soil Quality Towards Sustainable Agriculture Production. Wan Rasidah Kadir, Rosazlin Abdullah, Ahmed Osumanu Haruna, Mohamad Fakhri Ishak, Che Fauziah Ishak, Zulkefli Malik Aminah Hamzah, Rozita Ahmad and Jeyanny Vijayanathan (eds), 10-12 April 2012, Kota Bharu, Kelantan, pp. 422-426.
14. Panhwar Q.A., **Radziah O**., Shamshuddin J., Zaharah A.R., Mohd Razi I. And Naher U.A. 2012. Effect of phosphated-solubilizing bacteria on P uptake from different P fractions using ^{32}P technique in aerobic rice. In Proc. Soil Science Conference of Malaysia 2012; Soil Quality Towards Sustainable Agriculture Production. Wan Rasidah Kadir, Rosazlin Abdullah, Ahmed Osumanu Haruna, Mohamad Fakhri Ishak, Che

	Fauziah Ishak, Zulkefli Malik Aminah Hamzah, Rozita Ahmad and Jeyanny Vijayanathan (eds), 10-12 April 2012, Kota Bharu, Kelantan, pp. 52-59. 15. Shukri R., **Radziah O**., Khanif M.Y. and Khairuddin A.R. 2012. Evaluation of locally isolated diazotroph as biofertilizer for rice in paddy field. In Proc. Soil Science Conference of Malaysia 2012; Soil Quality Towards Sustainable Agriculture Production. Wan Rasidah Kadir, Rosazlin Abdullah, Ahmed Osumanu Haruna, Mohamad Fakhri Ishak, Che Fauziah Ishak, Zulkefli Malik Aminah Hamzah, Rozita Ahmad and Jeyanny Vijayanathan (eds), 10-12 April 2012, Kota Bharu, Kelantan, pp. 260-263. 16. Bahi jalili Seh-Bardan, **Radziah O**. Samsuri Abd Wahid, Aminuddin Husin and Fardin Sadegh-zadegh. 2012. Biosorption of heavy metal in leachate derived from bioleaching of gold mine tailings using Aspergilus fumigatus. In Proc. Soil Science Conference of Malaysia 2012; Soil Quality Towards Sustainable Agriculture Production. Wan Rasidah Kadir, Rosazlin Abdullah, Ahmed Osumanu Haruna, Mohamad Fakhri Ishak, Che Fauziah Ishak, Zulkefli Malik Aminah Hamzah, Rozita Ahmad and Jeyanny Vijayanathan (eds), 10-12 April 2012, Kota Bharu, Kelantan, pp. 103-109. 17. Panhwar, Q.A., **Radziah O**., Zaharah A Rahman, Sariah M., and Mohd Razi. 2011. Effect of phophatic fertilizer on root colonization of aerobic rice by phosphate-solubilizing bacteria. 2011. In Proceedings International Conference on Food Engineering and Biotechnology. May 28-29 2011, Bangkok, Thailand ,Vol 9. Wu Kaijing (ed), IACSIT Press, Singapore, pp.145-149. 18. Yasmi A, **Radziah O**, Hawa Jaafar ZE, Zainal A.2011. Isolation and characterization of indigenous bacteria from Kacip Fatimah (Labisia pumila). In Proc Soil Science Conference of Malaysia 2011; Soil Fertility and Plantation Productivity. Mahmud Sudin, Normah Awang Besar, Mohamadu Boyie Jalloh, Che Fauziah Ishak, Mandy Maid and Julius Kodoh(eds), 19-21 April 2011, Kota Kinabalu, Sabah, pp.309-313. 19. Kala DR, Rosenani AB, Ahmad SH, Fauziah CI and **Radziah O**.2011. Application of oil palm waste-based organic fertilizer in sweetcorn cultivation: Effects on yield, soil properties and carbon stock after three crop cycles. In Proc Soil Science Conference of Malaysia 2011; Soil Fertility and Plantation Productivity. Mahmud Sudin, Normah Awang Besar, Mohamadu Boyie Jalloh, Che Fauziah Ishak, Mandy Maid and Julius Kodoh(eds), 19-21 April 2011, Kota Kinabalu, Sabah, pp.235-238. 20. Arina AS, Goh KJ, Anuar AR and **RadziahO**.2011. Different forms of nitrogen ions affect growth, nitrogen uptake and nitrogen partitioning in oil palm seedlings (Elaeis guineensis Jacq.) In Proc Soil Science Conference of Malaysia 2011; Soil Fertility and Plantation Productivity. Mahmud Sudin, Normah Awang Besar, Mohamadu Boyie Jalloh, Che Fauziah Ishak, Mandy Maid and Julius Kodoh(eds), 19-21 April 2011, Kota Kinabalu, Sabah, pp.163-168.
Other publications	
Computer software	

H. PROJEK PENYELIDIKAN TERDAHULU*(Past Research Project)*

Project No.	*Project Title*	*Role*	*Year*	*Source of fund*	*Status*
1) -	Utilization of Agricultural Wastes and organic matter Recycling	Researcher	1988-1990	IRPA	Completed
2) -	Increased Activities of Microorganisms and Mineralization of Plant Nutrients in sandy Soil Amended with Organic Matter	Researcher	1991-1995	IRPA	Completed
3) -	Production of Phytotoxin from various Organic Residues and Their Degradation by Microorganisms	Project leader	1995	IRPA, Seed money	Completed
4) - RM101,000.00	Alleviation of Allelopathic Effects on Mineralization of Agricultural Wastes, Growth of N_2 Fixing *Azospirillum* and Production of Sweetpotato (*Ipomoea batatas)*	Project leader	1996-2000	IRPA	Completed
5) - RM126,000.00	Enhancement of Sweetpotato Quality through Combined Application of Bacteria and Arbuscular Mycorrhiza on Organically Amended Soil	Project leader	2002-2004	IRPA	Completed
6) - RM191,000.00	Improved Yield of Onion (*Allium ascolonium*) through Combined Inoculation with Rhizobacteria and Arbuscular Mycorrhiza	Project leader	2002-2004	IRPA	Completed
7) - RM155,923.00	Influence of Rice Genotype and Its Asociated Diazotrophs on Biological N_2 Fixation and Nitrogen Use Efficiency	Project leader	2006-2008	MOSTI	Completed
8) – RM83,000.00	Effect of Rhizobacterial Inoculation on Production of Hydrolytic Enzymes in Paddy Roots	Project leader	2006-2008	MOSTI	Completed
9) – RM248,000.00	Application of Arbuscular Mycorrhiza and Plant growth-Promoting Rhizobacteria (PGPR) on vegetables and field crops on BRIS soil under the program Soil Management for Sustainable Crop production in Bris Soils.	Project leader	2007-2009	RUGS	completed
10) - RM181,6000.00	Application of Organic Residues, Mycorrhizal Fungi and Phosphate-Solubilizing Bacteria for Increased Nutrient Uptake, Growth and Tuber Yield of Sufed Musli.	Project leader	2007-2011	Yayasan Felda	Completed
11)- RM131,000.00	Application of Associative Nitrogen-Fixing Bacteria for Improved Growth and Nitrogen Use Efficiency of Rice.	Project leader	2009	Science fund	Completed
12) - RM150,000.00	Biodiversity of Soil Microorganisms Using Conventional Method.	Project leader	2010-2015	MPOB	Completed
13) - 07-12-10-1034FR. RM78,000.00	Influence of Oil Palm root exudates on Arbuscular Mycorrhizal colonization.	Project leader	2010-2013	FRGS	Completed
14) - RM500,000.00	Alleviation of degraded soils for rice cultivation. Long Term Research Grant Scheme (LRGS), Ministry of Higher Education, Malaysia (MOHE), 1st August 2011-31 July	Co-researcher	2011-2016	LRGS	Completed

	2016				
15) – RM172,200.00	Program Peningkatan Hasil Padi di Merbok, Kedah Secara Lestari	Co-researcher	2012-2014	KTP, MOHE	Completed
16) - RM108,650.00	Application of Liquid Biofertilizer (Green Technology) to Enhance Impact of Chemical Fertilizer on Yield of Hydroponically GrownHerbs and Vegetables	Co-researcher	2012-2014	KTP, MOHE	Completed
17) 01-02-12-1707RU. RM75,000.00	Influence of Iron (Fe) and Molybdenum (Mo) on N fixation and Phosphate Solubilization in Aerobic Rice Inoculated with Beneficial Microorganisms	Project leader	2012-2014	RUGS	Completed
18) PRGS/1/2013/STWNO/UPM/02/1. RM375,000.00	Up-scaling of Multistrain Bacterial Inoculums carrier for EFB Compost Biofertilizer Production.	Project leader	2013-2015	PRGS	Completed
19) – RM464,600.00	Biology, epidemiology and management of basal stem rot (BSR) incidence and Oryctes and Bagworm infestation in oil palm plantations	Co-researcher	2013-2017	United Malacca Berhad	On-going (end of project)
20) FRGS/1/2014/STWN03/UPM/02/3. RM95,200.00	Application of arbuscular mycorrhizal fungi in association with nitrogen-fixing bacteria and phosphate solubilizing bacteria for improved growth and yield of strawberry.	Project leader	2014-2017	FRGS	On-going (end of project)
21) TRGS/1/2015/UPM/01/2/3. RM150,000.00	Establishing crop production on land affected by flood in the Kelantan plain. TRGS.	Co-researcher	2015-2016	TRGS	Completed
22) - RM583,500.00	Enhancing the fertility of acidic Malaysian soils for sustainable oil palm cultivation using Mg-rich synthetic gypsum. Lynas Sdn. Berhad.	Co-researcher	2015-2017	Lynas Sdn. Bhd.	On-going
23) - RM25,000.00	Pelaksanaan dan Penaksiran program berasaskan work-based learning (WBL), Geran Insentif Penyelidikan dalam Pengajaran dan Pembelajaran (GIPP).	Project leader	2016-2018	GIPP, UPM	On-going
24) - RM90,000.00	Bioformulation for effective control of white root rot disease of rubber *(Hevea brasiliensis).*	Project leader	2017-2020	PUTRA GRANT	On-going