Staff Handbook

Name	*Dr. Ir. Asih Kurniawati, S.Pt., M.Si., IPM.*		
Post	*Biotechnology*		
Academic career	*Professional Engineering (IPM)*	*Universitas Gadjah Mada*	*2018*
	Doctorate	*Universitas Gadjah Mada*	*2018*
	Graduate degree	*Universitas Gadjah Mada*	*1999*
	Undergraduate degree	*Universitas Gadjah Mada*	*1995*
Employment	*Assistant Professor*	*Government (civil servant)*	*2010-present*
Research and development projects over the last 5 years	*Research projects:* 1. *Natural Bioactive Plant-Based Feed Supplement Technology for Environmentally Friendly Livestock Development (Green Livestock) (2020)* *Source of Funds: PTUPT, PTNBH-Kemenristekdikti* 2. *The Effect of Addition of Mixture Lactic Acid Bacteria in a Feed High in Unsaturated Fatty Acids on the Morphology and Diversity of Gastrointestinal Bacteria, as well as the Fatty Acid Content of Blood, Liver, and Broiler Chicken Meat (2020)* *Source of Funds: UGM Faculty of Animal Science Laboratory Thematic Grants* 3. *Utilization of Casein Protein from Pasteurized Cow's Milk By-products as Bioplastic Raw Materials (2020)* *Source of Funds: Faculty of Animal Science, UGM Postgraduate Grants* 4. *Complete Pellets with Balanced Protein Sources at Different Levels to Increase Rabbit Productivity (2019)* *Source of Funds: Final Project Recognition Program, UGM* 5. *Blend Essential Oils as Methane Reducing Feed Additives in Rumen Fermentation through a Molecular Approach (2019)* *Source of Funds: Final Project Recognition Program, UGM* 6. *Natural Bioactive Plant-Based Feed Supplement Technology for the Development of Environmentally Friendly Livestock (Green Livestock) (2019)* *Source of Funds: Leading University Applied Research, Ristekdikti* 7. *Study of Natural Bioactive Compounds from Nutmeg (Myristica fragrance) Fruits, Seeds and Leaves and Their Applications in Improving Feed Quality and Livestock Productivity (2019)* *Source of Funds: Laboratory Thematic Research Grants, Faculty of Animal Science UGM* 8. *Natural Bioactive Plant-Based Feed Supplement Technology for*		

	Development of Environmentally Friendly Livestock (Green Livestock) (2018) *Source of Funds: PTUPT, Ristekdikti* 9. *Engineering Protein Fermentation Block as Feed Additive (2018)* *Source of Funds: CPPBT, Ristekdikti* 10. *Evaluation of Sorghum Bicolor sp. As a Source of Feed Biomass and Bioethanol (2018)* *Source of Funds: Faculty of Animal Science Postgraduate Research Grants (UGM)* 11. *Study of Natural Bioactive Compounds from Black Cumin Cake (Nigella sativa L.) and Its Application in Feed for Environmentally Friendly Livestock Development (Green Livestock) (2018)* *Source of Funds: Laboratory Thematic Grant, Faculty of Animal Science UGM* 12. *Plant Secondary Metabolites as Feed Additives: Effect of Patchouli Essential Oil (Pogostemon cablin Benth.) in In Vitro Rumen Fermentation (2017)* *Source of Funds: Faculty of Animal Science, UGM Laboratory Thematic Grants* *Community Service over the last 5 years* 1. *Sheep Village: Development of a Sheep Farming Center to Improve the Economy of the Kadilanggon Village Community, Wedi District, Klaten Regency (2020)* *Source of Funds: Kadilanggon Village Government, Wedi, Klaten* 2. *Community Service Through Cultivation of Umbaran Layers to Produce Functional Eggs at IS ASWAJA Islamic Boarding School Lintang Songo, Pagergunung Hamlet, Piyungan, Bantul, Yogyakarta (2020)* *Source of Funds: PT Widodo Makmur Unggas and Lab. Nutritional Biochemistry Faculty. UGM Farm* 3. *Community Service Through Cultivation of Umbaran Layers to Produce Functional Eggs in the Dasawisma Dewi Sari Women's Association, Buyutan, Gadingsari, Sanden, Bantul, Yogyakarta (2020)* *Source of Funds: PT Widodo Makmur Unggas and Lab. Nutritional Biochemistry Faculty. UGM Farm* 4. *Community Service Based on Fostered Village Development in Balak Hamlet, Pendoworejo Village, Girimulyo District, Kulonprogo Regency (2020)* *Source of Funds: Indonesian Association of Biochemistry and Molecular Biology*

	5. *Development of Eco-Friendly Livestock Using Feed Supplement Technology Based on Natural Bioactive Tropical Plants in the Ayo Angon Livestock Group, Buyutan Hamlet, Ngalang Village, Gedangsari District, Gunung Kidul Regency (2020)* *Source of Funds: Thematic Grants for Laboratory Service UGM Faculty of Animal Science* 6. *Extension on Total Mixture Ration (TMR) Based on Fermentation and Empowerment of Livestock Plasma-Core Institutions (2019)* *Source of Funds: Faculty of Animal Science, Universitas Gadjah Mada* 7. *Application of Forage Fermentation Technology as a Solution for Fulfilling Animal Feed Needs in Peri-Urban Areas at Irsyadul Anam Islamic Boarding School, Kiyudan, Selomartani, Kalasan, Sleman, Yogyakarta (2018)* *Source of Funds: Laboratory Thematic Service Grants, Faculty of Animal Science UGM*
Industry collaborations over the last 5 years	-
Patents and proprietary rights	1. *Fermentation-Based Supplementary Feed and Its Manufacturing Process (Zaenal Bachruddin,* ***Asih Kurniawati****)* *2021*
Important publications over the last 5 years	*Total number of publications: 38* 1. *The Effect of the Purple Sweet Potato (Ipomoea Batatas L.) on the Fish Waste Silage Composition (Muhammad Zulfikar Fikri, Zaenal Bachruddin,* ***Asih Kurniawati****, Chusnul Hanim) (2021)* *Publisher: Advances in Biological Sciences Research, Volume 18 Proceedings of the 9th International Seminar on Tropical Animal Production (ISTAP 2021)* 2. *Effect of purple sweet potato levels (Ipomoea batatas L.) carbohydrate sources on fermentation kinetics and lactic acid production by Lactobacillus paracasei (Tasminto, D., Bachruddin, Z.,* ***Kurniawati, A****., Muhlisin) (2021)* *Publisher: IOP Conference Series: Earth and Environmental Science, 2021, 686(1), 012048* 3. *Effect of addition cilembu sweet potato extract (Ipomoea batatas Cilembu) as a prebiotic source for the kinetics of fermentation and lactic acid production by Lactobacillus paracasei (Swithenia, F., Bachruddin, Z.,* ***Kurniawati, A****., Yusiati, L.M.) (2021)* *Publisher: IOP Conference Series: Earth and Environmental Science, 2021, 686(1), 012046* 4. *Merino sheep nitrogen balance with the addition of mahogany leaves (Swietenia mahagoni) as tannins source in feed (Azizah,*

	*E.R., Hanim, C., Yusiati, L.M., **Kurniawati, A**.) (2021)* *Publisher: IOP Conference Series: Earth and Environmental Science, 2021, 667(1), 012014* 5. *The effect of additional tannins source from Mahagony leaves (Swietenia mahagoni) to purine derivate excretion in urine and synthesis of rumen microbial protein of Merino sheep (Lestari, E.A., Hanim, C., Yusiati, L.M., **Kurniawati, A**.) (2021)* *Publisher: IOP Conference Series: Earth and Environmental Science, 2021, 667(1), 012062* 6. *The effects of catfish oil supplementation as the unsaturated fatty acid source on Bali Cattle gas production kinetics, dry matter digestibility, and organic matter digestibility in vitro (Cahyo, D.N., Yusiati, L.M., **Kurniawati, A**., Hanim, C., Muhlisin) (2021)* *Publisher: IOP Conference Series: Earth and Environmental Science, 2021, 637(1), 012058* 7. *Methane Production and Methanogens Diversity in vitro Ruminal Fermentation with Mahogany Leaves Meal (Swietenia mahagoni) as Tannin Source (Hasanah, C., **Kurniawati, A**., Yusiati, L.M., Muhlisin, Bachruddin, Z.) (2020)* *Publisher: IOP Conference Series: Earth and Environmental Science, 2020, 478(1), 012089* 8. *Heating Effect on Rumen Digestion of Protein Feeds Fermented by Lactic Acid Bacteria (Sanjaya, H.L., Bachrudin, Z., **Kurniawati, A**., Hanim, C., Yusiati, L.M.) (2020)* *Publisher: IOP Conference Series: Earth and Environmental Science, 2020, 478(1), 012029* 9. *Effect of (Leucaena leucocephala) Leaves as Tannin Source on Rumen Microbial Enzyme Activities and in Vitro Gas Production Kinetics (Mahanani, M.M.P., **Kurniawati, A.,** Hanim, C., Anas, M.A., Yusiati, L.M.) (2020)* *Publisher: IOP Conference Series: Earth and Environmental Science, 2020, 478(1), 012088* 10. *The Effect of Bromelain from Pineapple (Ananas comosus) on Increasing Protein Digestibility of Milk Replacer for Lam (Putriana, L., Bachruddin, Z., Hanim, C., **Kurniawati, A**., Yusiati, L.M., Widayati, O.) (2020)* *Publisher: IOP Conference Series: Earth and Environmental Science, 2020, 478(1), 012030* 11. *Effect of Cinnamon Bark Meal (Cinnamomum burmanni Ness ex Bl) on in Vitro Methane Production and Rumen Methanogens Diversity (Hadianto, I., Yusiati, L.M., Bachrudin, Z., Suhartanto, B., Hanim, C., **Kurniawati, A**.) (2020)* *Publisher: IOP Conference Series: Earth and Environmental*

	Science, 2020, 478(1), 012027 12. *Antibacterial Activity of Maja Fruit Extract Against Escherichia coli and Its Potential as Urease Inhibitor for Reducing Ammonia Emission in Poultry Excreta (Fitriyanto, N.A., Lewa, N., Prasetyo, R.A., **Kurniawati, A**., Erwanto, Y., Bachruddin, Z., Muhlisin, Wihandoyo) (2020)* *Publisher: IOP Conference Series: Earth and Environmental Science, 2020, 465(1), 012006* 13. *Physical and chemical characteristics of rabbit complete pellet feed containing different levels of Leucaena leaf meal (Prayoga, J., Astuti, A., **Kurniawati, A**.) (2020)* *Publisher: IOP Conference Series: Earth and Environmental Science, 2020, 425(1), 012088* 14. *Improvement of ruminal feed fermentation by addition of eucalyptus based mix essential oil (**Kurniawati, A**., Wigati, D.N., Hasanah, C., Yusiati, L.M.) (2020)* *Publisher: IOP Conference Series: Earth and Environmental Science, 2020, 425(1), 012086* 15. *Nutrient digestibility on ruminal fermentation in vitro with the addition of rumen modifier based on Clove (Syzygium aromaticum. L.) and Fennel (Foeniculum vulgare. Mill.) essential oil (**Kurniawati, A.**, Saputra, W.E., Mahardillah, L., Hanim, C., Yusiati, L.M.) (2020)* *Publisher: IOP Conference Series: Earth and Environmental Science, 2020, 425(1), 012085* 16. *Study of Local Herb Potency as Rumen Modifier: Red Ginger (Zingiber Officinale Var. Rubrum) Addition Effect on In Vitro Ruminal Nutrient Digestibility (**A Kurniawati**, LM Yusiati, W Widodo, WT Artama) (2020)* *Publisher: Animal Production 21 (1), 30-37* 17. *Parameter of ruminal feed fermentation in vitro with the addition of clove essential oil (Syzygium aromaticum L.) as feed additive (Mulyandari, F., Yusiati, L.M., **Kurniawati, A**.) (2019)* *Publisher: IOP Conference Series: Earth and Environmental Science, 2019, 387(1), 012111* 18. *The effect of addition of turmeric (Curcuma longa L.) on the rancidity process of concentrate feed based on lactic acid bacteria fermentation during aerobic storage (Pangistika, A.W., Bachruddin, Z., **Kurniawati, A**., Utomo, R., Hanim, C.) (2019)* *Publisher: IOP Conference Series: Earth and Environmental Science, 2019, 387(1), 012099* 19. *Addition of essential oil source, Amomum compaction Soland ex Maton, and its effect on ruminal feed fermentation in-vitro*

	*(**Kurniawati, A**., Widodo,, Artama, W.T., Yusiati, L.M.) (2019)* *Publisher: Biotropica, 2019, 26(3), pp. 172–180* 20. *Effects of Lemongrass Leaves as Essential Oil Sources on Rumen Microbial Ecology and Nutrient Digestibility in an in vitro System (Insani Hubi Zulfa, Zaenal Bachruddin, and **Asih Kurniawati**) (2019)* *Publisher: Pak. J. Nutr., 18 (3): 254-259, 2019* 21. *Addition of essential oil source, amomum compactum soland ex maton and its effect on ruminal feed fermentation in-vitro **(A Kurniawati**, W Widodo, WT Artama, LM Yusiati) (2019)* *Publisher: BIOTROPIA-The Southeast Asian Journal of Tropical Biology 26 (3), 172-180* 22. *Protein Binding Capacity of Different Forages Tannin (Yusiati, L.M., **Kurniawati, A**., Hanim, C., Anas, M.A.) (2018)* *Publisher: IOP Conference Series: Earth and Environmental Science, 2018, 119(1), 012007* 23. *Study of Local Herb Potency as Rumen Modifier: The Effect of Red Ginger (Zingiber officinale var. Rubrum) on Parameters of Ruminal Fermentation in Vitro (**Kurniawati, A**., Widodo, W., Artama, W.T., Yusiati, L.M.) (2018)* *Publisher: IOP Conference Series: Earth and Environmental Science, 2018, 119(1), 012058* 24. *Effects of adding chicken blood meal and fishmeal to sludge biogas as white oyster mushroom media (Pertiwiningrum, A., Hapsari, D.J., Ratnaningrum, P., **Kurniawati, A**., Rochijan, Nugroho, R.D.) (2018)* *Publisher: Pakistan Journal of Biological Sciences, 2018, 21(1), pp. 29–37* 25. *Effects of Pinus merkusii jungh. & de Vriese Essential Oil on Methane Production and Ruminal Feed Fermentation **(Asih Kurniawati**) (2018)* *Publisher: Presented at International Congress on Agriculture and Animal Sciences (ICAGAS), Turkey* 26. *The Effect of Lactose Level as Substrate to Bacteriocins Production on Lactobacillus paracasei Fermentation (Bachruddin, Z., **Kurniawati, A**., Yusiati, L.M., Hanim, C. & Marantika, Y.) (2018)* *Publisher: E-Proceedings 18th AAAP Congress 2018, 1-5 Aug. 2018, Kuching, Malaysia. pp. 98* 27. *The Effect of Lactose Level as Substrate to Bacteriocins Production on Lactobacillus paracasei Fermentation (Bachruddin, Z., **Kurniawati, A**., Yusiati, L.M., Hanim, C. & Marantika, Y.)*

	(2018) *Publisher: E-Proceedings 18th AAAP Congress 2018, 1-5 Aug. 2018, Kuching, Malaysia. pp. 98* 28. *Effects of Adding Chicken Blood Meal and Fishmeal to Sludge Biogas as White Oyster Mushroom Media (Ambar Pertiwiningrum, Dianita Juli Hapsari, Palupi Ratnaningrum**, **Asih Kurniawati,** Rochijan, and Ramdhan Dwi Nugroho) (2018)* *Publisher: Pakistan Journal of Biological Sciences Vol. 21 No.1 Page 29-37.* 29. *Effects of Four Essential Oils on Nutrients Digestibility of In Vitro Ruminal FermentationEffects of Four Essential Oils on Nutrients Digestibility of In Vitro Ruminal Fermentation (**Asih Kurniawati**, Widodo, Wayan Tunas Artama, Lies Mira Yusiati) (2018)* *Publisher: Buletin Peternakan Vol. 42 No. 2 Hal. 122-126.* 30. *Effect of Fermentation on Compositional Changes of Cinnamomum osmophloeum Kaneh Leaves (**Kurniawati, A.**, D., Huang, T.C., Kusnadi, J.) (2017)* *Publisher: IOP Conference Series: Materials Science and Engineering, 2017, 193(1), 012013* 31. *The Effect of Cumin (Cuminum cyminum) Addition as Source of Essential Oils on Nutrien Digestibility, VFA, Ammonia and Methane Production (Penulis ke-1 dari 4) (2017)* *Publisher: The 7th International Seminar on Tropical Animal Production (ISTAP), September 12-14, 2017, Yogyakarta, Indonesia. Pages: 128-132. ISBN: 978-979-1215-29-9* 32. *In Vitro Gas Production of Lemongrass Leaves as Essential Oil Source and its Effect on The Kinetics of Gas Production (Penulis ke-2 dari 3) (2017)* *Publisher: The 7th International Seminar on Tropical Animal Production (ISTAP), September 12-14, 2017, Yogyakarta, Indonesia. Pages: 147-151. ISBN: 978-979-1215-29-9* 33. *Amomum compactum Soland ex Maton Addition as Essential Oil Source and Its Effect on Ruminal Feed Fermentation (Penulis ke-1 dari 4) (2017)* *Publisher: 1st International Conference of Essential Oil (ICEO 2017), Oktober, 11-12, 2017. Malang – Indonesia* 34. *Feed supplementation for dairy cattle by using multi-nutrient feed supplement without molasses (MFSWM) (Penulis ke-3 dari 4) (2017)* *Publisher: Program and Abstract Book of the Sixth SAADC Conference, Batu 16 – 19 October 2017 "Wisdom of Using Local Resources for Development of Sustainable Animal Production in*

	Developing Countries". Batu City, Indonesia. Page: 209 35. *Study of local herb potency as rumen modifier: The effect of Red Ginger (Zingiber officinale var. Rubrum) on parameters of ruminal fermentation parameter in vitro (Penulis ke-1 dari 4) (2017)* *Publisher: International Ruminant Seminar, Universitas Diponegoro, Semarang, Indonesia, 24 October 2017* 36. *The Effect of Hibiscus Rosa-Sinensis L. Leaves as Defaunating Agent on In Vitro Gas Production of Feed (Penulis ke-2 dari 3) (2017)* *Publisher: Proceedings of The 5th International Seminar of Animal Nutrition & Feed Science (ISAINI), Mataram-Indonesia, 7-9 November 2017. Pages: 164-170. ISBN: 978-602-51437-0-0 eISBN: 978-602-51437-1-7* 37. *Study of Local Herb Potency As Rumen Modifier: The Effect of Red Ginger Addition In Diet on In Vitro Ruminal Nutrien Digestibility (Penulis ke-1 dari 4) (2017)* *Publisher: Present at The 5th International Seminar of Animal Nutrition & Feed Science (ISAINI), Mataram-Indonesia, 7-9 November 2017* 38. *Effect of lemongrass (Cymbopogon citratus) litter supplementation as essential oil source on in vitro ruminal nutrient digestibility (Penulis ke-2 dari 4) (2017)* *Publisher: Proceedings of The 5th International Seminar of Animal Nutrition & Feed Science (ISAINI), Mataram-Indonesia, 7-9 November 2017. Pages: 197-206. ISBN: 978-602-51437-0-0 eISBN: 978-602-51437-1-7*
Activities in specialist bodies over the last 5 years	-