DAFTAR PUSTAKA

Abdoellah, O. S., Suparman, Y., Safitri, K. I., Mubarak, A. Z., Milani, M., Margareth et al., 2023. Between food fulfillment and income: Can urban agriculture contribute to both?. Geography and Sustainability 4(2), 127–137. https://doi.org/10.1016/j.geosus.2023.03.001.

Abdulai, A., and Huffman, W., 2014. The Adoption and Impact of Soil and Water Conservation Technology: An Endogenous Switching Regression Application. Land Economics 9 (1), 26-43.

Abdullahi, M. and Gupta, Y., 2022. Financing agriculture in nigeria: a comparative review of roles played by private, public, and international financial institutions and agencies. Universal Journal of Accounting and Finance, 10(6), 925-937. https://doi.org/10.13189/ujaf.2022.100602.

Abdul-Rahaman, A., and Abdulai, A., 2018. Do farmer groups impact on farm yield and efficiency of smallholder farmers? Evidence from ice farmers in northern Ghana. Food Policy 81, 95–105. https://doi.org/10.1016/j.foodpol.2018.10.007.

Abdul-Rahaman, A., and Abdulai, A., 2022. Mobile money adoption, input use, and farm output among smallholder rice farmers in Ghana. Agribusiness 38(1), 236–255. https://doi.org/10.1002/agr.21721.

Abokyi, E., Strijker, D., Asiedu, K. F. and Daams, M., 2020. The impact of output price support on smallholder farmers' income: evidence from maize farmers in ghana. Heliyon, 6(9), e05013. https://doi.org/10.1016/j.heliyon.2020.e05013.

Adams, A., Caesar, L. D. and Asafu-Adjaye, N. Y., 2022. What Informs Farmers' Choice of Output Markets? The Case of Maize, Cowpea and Livestock Production in Northern Ghana. International Journal of Rural Management 18(1), 56–77. https://doi.org/10.1177/0973005221994425.

Addai, K., Temoso, O. and Ng'ombe, J. 2021. Participation in farmer organizations and adoption of farming technologies among rice farmers in ghana. International Journal of Social Economics, 49(4), 529-545. https://doi.org/10.1108/ijse-06-2021-0337.

Afdal, A., Martius, E. dan Erwin, E., 2022. Analisis tata kelola pembiayaan usahatani jagung di Kabupaten Pasaman Barat. JRTI (Jurnal Riset Tindakan Indonesia), 7(3), 444-457. https://doi.org/10.29210/30032056000.

Agus, F., Andrade, J. F., Rattalino Edreira, J. I., Deng, N., Purwantomo, D. K. G., Agustiani, N. et al., 2019. Yield gaps in intensive rice-maize cropping sequences in the humid tropics of Indonesia. Field Crops Research 237, 12–22. https://doi.org/10.1016/j.fcr.2019.04.006.

Agussabti, A., Romano, R., Rahmaddiansyah, R. and Isa, R. M., 2020. Factors affecting risk tolerance among small-scale seasonal commodity farmers and

strategies for its improvement. Heliyon, 6(12), e05847. https://doi.org/10.1016/j.heliyon.2020.e05847.

Agyapong, S., Mensah, N. O., Anang, S. A., Nakuja, T. and Tutu, F. O., 2024. Impact of village savings and loans associations participation on cocoa farmers' livelihood in the Western North Region, Ghana. Journal of Agriculture and Food Research 18, 101356. https://doi.org/10.1016/j.jafr.2024.101356.

Ajadi, A. A., Oladele, O. I., Ikegami, K. and Tsuruta, T., 2016. Farmers' Awareness, Participation and Sources of Information on Extension Activities in Rural Nigeria: A Case of Patigi Local Government Area of Kwara State. Journal of Rural Problems 52(4), 253–258. https://doi.org/10.7310/arfe.52.253.

Akbar, Salam, M., Arsyad, M. and Rahmadanih., 2023. The Role of Human Capital in Strengthening Horticultural Agribusiness Institutions: Evidence from Structural Equation Modeling. International Journal of Sustainable Development and Planning 18(9), 2839–2846. https://doi.org/10.18280/ijsdp.180922.

Akimowicz, M., Landman, K., Képhaliacos, C. and Cummings, H., 2022. Toward Agricultural Intersectionality? Farm Intergenerational Transfer at the Fringe. A Comparative Analysis of the Urban-Influenced Ontario's Greenbelt, Canada and Toulouse InterSCoT, France. Frontiers in Sustainable Food Systems 5, 759638. https://doi.org/10.3389/fsufs.2021.759638.

Akrong, R., Mbogoh, S. and Irungu, P., 2021. What factors influence access to and the level of participation in high value mango markets by smallholder farmers in ghana?. Heliyon, 7(3), e06543. https://doi.org/10.1016/j.heliyon.2021.e06543.

Al-Kaisi, M. M., Elmore, R. W., Miller, G. A. and Kwaw-Mensah, D., 2015. Extension Agriculture and Natural Resources in the U.S. Midwest: A Review and Analysis of Challenges and Future Opportunities. *Natural Sciences Education 44*(1), 26–33. https://doi.org/10.4195/nse2014.10.0022.

Allan, E., Ndiaye, A., Mei, S., Raber, E. and Kuo, W., 2022. Developing a culturally acceptable peanut nutrition bar with smallholder women farmers in kaffrine, senegal using response surface methodology. Journal of Food Science, 88(2), 608-624. https://doi.org/10.1111/1750-3841.16412.

Amam, A., Rusdiana, S., Maplani, M., Talib, C., Adiati, U. and Priyatno, T. P., 2023. Integration of sheep and corn in rural agriculture in Indonesia. E3S Web of Conferences, 373. https://doi.org/10.1051/e3sconf/202337301001.

Aminah, S., Sahab, A. and Roikan, R., 2024. Political economy of farmer group empowerment policy to support the achievement of sdgs. Jurnal Sosiologi Dialektika, 19(1), 23-38. https://doi.org/10.20473/jsd.v19i1.2024.23-38.

Anang, B.T., Backman, S. and Sipilainen, T., 2020. Adoption and income effects of agricultural extension in northern Ghana. Scientific African 7, e00219. https://doi.org/10.1016/j.sciaf.2019.e00219.

Anantanyu, S., 2011. Kelembagaan Petani: Peran Dan Strategi Pengembangan Kapasitasnya. SEPA 7(2), 102–109.

Ao, G., Liu, Q., Li, Q., Chen, M., Liu, S. and Wu, W. 2021. Organization model, vertical integration, and farmers' income growth: empirical evidence from large-scale farmers in lin'an, china. Plos One, 16(6), e0252482. https://doi.org/10.1371/journal.pone.0252482.

Anwar, S., Ramadian, D. and Ekawati, I., 2025. Optimization model framework for coordinating farmers and a cooperative in the gambier supply chain. IOP Conference Series: Earth and Environmental Science, 1476(1), 012049. https://doi.org/10.1088/1755-1315/1476/1/012049.

Arimbawa, P., Batoa, H. and Sidu, D., 2023. The Role of Communication of Farmer Learning : The Case of Farmer Institution-Based Cocoa Replanting in East Kolaka District, Indonesia. International Journal of Engineering Business and Social Science 1(3), 220-231.

Ariti, A. T., van Vliet, J. and Verburg, P. H., 2018. Farmers' participation in the development of land use policies for the Central Rift Valley of Ethiopia. Land Use Policy 71, 129–137. https://doi.org/10.1016/j.landusepol.2017.11.051.

Arsyad, M., Nuddin, A., Fahmid, M., Darmawan, S., Aries, D., Pulubuhu, T. et al., 2021. Linkage of Roles Between Institutions for Agricultural Development in Indonesian Border Area. Agroland 28(1), 1–16.

Aruna, M., Unang, U. and Hikmahwidi, R. 2023. Role of farmers' groups in increasing robusta coffee farmers' participation in the village of linggajati, sukaratu district, tasikmalaya regency. East Asian Journal of Multidisciplinary Research, 2(1), 393-406. https://doi.org/10.55927/eajmr.v2i1.2751.

Attri, R., Dev, N. and Sharma, V., 2013. Interpretive Structural Modelling (ISM) approach: An Overview. Research Journal of Management Sciences. Vol. 2(2), 3-8.

Attipoe, S., G., Jian-min, C., Opoku-Kwanowaa, Y., Ohene-Sefa, F., 2021. Assessing the impact of non-governmental organization's extension programs on sustainable cocoa production and household income in Ghana. Journal of Integrative Agriculture 2021, 20(10): 2820–2836.

Azwar, Muljono, P., Herawati, T., 2016. Persepsi dan Partisipasi Petani dalam Pelaksanaan Rehabilitasi Tanaman Kakao di Kabupaten Sigi Provinsi Sulawesi Tengah. Jurnal Penyuluhan 12 (2), 157-167.

Banda, G., 2022. Evolution of Zimbabwe's Maize Innovation Ecosystems: Building an Institutional Innovation Infrastructure that Supported Food Security. Africa Development 47(3), 167–195. https://doi.org/10.57054/ad.v47i3.2679.

Barokatuminalloh, Widayaningsih, N. and Setiarso, O., 2022. Role of institutions to improve farmer's resilience in facing climate change. IOP Conference Series: Earth and Environmental Science 1114(1). https://doi.org/10.1088/1755-1315/1114/1/012087.

Barrett, C. B., Bachke, M. E., Bellemare, M. F., Michelson, H. C., Narayanan, S. and Walker, T. F., 2012. Smallholder participation in contract farming: Comparative

evidence from five countries. World Development 40(4), 715–730. https://doi.org/10.1016/j.worlddev.2011.09.006.

Basri, Z., Bulkis, S., Arsyad, M. and Bdr, M.F., 2022. The role of agribusiness institutions in the progress of cocoa farming in west sulawesi. Iop Conference Series Earth and Environmental Science, 1107(1), 012104. https://doi.org/10.1088/1755-1315/1107/1/012104.

Basri, Z., Bulkis, S., Arsyad, M. and Bdr, M. F., 2023. Identifying Agribusiness Institutions and their Role in Increasing Cocoa Production: Evidence from Polewali Mandar, Indonesia. International Journal of Sustainable Development and Planning 18(1), 53–59. https://doi.org/10.18280/ijsdp.180105.

Belachew, A., Mekuria, W. and Nachimuthu, K., 2020. Factors influencing adoption of soil and water conservation practices in the northwest Ethiopian highlands. International Soil and Water Conservation Research 8(1), 80–89. https://doi.org/10.1016/j.iswcr.2020.01.005.

Bellon-Maurel, V., Piot-Lepetit, I., Lachia, N. and Tisseyre, B., 2023. Digital agriculture in Europe and in France: which organisations can boost adoption levels?. Crop and Pasture Science 74(6), 573–585. https://doi.org/10.1071/CP22065.

Berchoux, T., Watmough, G. R.,Johnson, F.A., Hutton, C. W. and Atkinson, P. M., 2020. Collective influence of household and community capitals on agricultural employment as a measure of rural poverty in the Mahanadi Delta, India. Ambio 49(1), 281–298. https://doi.org/10.1007/s13280-019-01150-9.

Bernard, T., Collion, M. H., de Janvry, A., Rondot, P. and Sadoulet, E., 2008. Do Village Organizations Make a Difference in African Rural Development? A Study for Senegal and Burkina Faso. World Development 36(11), 2188–2204. https://doi.org/10.1016/j.worlddev.2007.10.010.

Bernard, T. and Spielman, D. J., 2009. Reaching the rural poor through rural producer organizations? A study of agricultural marketing cooperatives in Ethiopia. Food Policy 34(1), 60–69. https://doi.org/10.1016/j.foodpol.2008.08.001.

Bertolozzi-Caredio, D., Bardají, I., Garrido, A., Berry, R., Bijttebier, J., Gavrilescu, C. et al., 2021. Stakeholder perspectives to improve risk management in European farming systems. Journal of Rural Studies 84, 147–161. https://doi.org/10.1016/j.jrurstud.2021.04.004.

Beunen, R., Patterson, J. and Van Assche, K., 2017. Governing for resilience: the role of institutional work. Environmental Sustainability 28, 10–16. https://doi.org/10.1016/j.cosust.2017.04.010.

Beza, E., Reidsma, P., Poortvliet, P.M., Belay, M.M., Bijen, B.S. and Kooistra, L., 2018. Exploring farmers' intentions to adopt mobile Short Message Service (SMS) for citizen science in agriculture. Computers and Electronics in Agriculture 151, 295–310. https://doi.org/10.1016/j.compag.2018.06.015.

Bhandari, R., 2023. Good governance: rural development perspectives in nepal. Intellectual Journal of Academic Research, 1(1), 49-58. https://doi.org/10.3126/ijar.v1i1.69284.

Bhange, P. B., Bonny, B. P. and Karat, S., 2024. Climate risk management among smallholder farmers: a comparative analysis of flood-prone alappuzha and drought-affected gondia in india. Asian Journal of Agricultural Extension, Economics &Amp; Sociology, 42(11), 148-161. https://doi.org/10.9734/ajaees/2024/v42i112600.

Bizikova, L., Nkonya, E., Minah, M., Hanisch, M., Turaga, R.M.R., Speranza, C.I. et al., 2020. A scoping review of the contributions of farmers' organizations to smallholder agriculture. Nature Food 1(10), 620–630. https://doi.org/10.1038/s43016-020-00164-x.

Boakye, L.G., Osei, C.K. and Annor, S.Y., 2021. On-farm diversification strategies and improved welfare of the immiserated rural smallholder farmer: Fallacy or realism?. Cogent Social Sciences 7(1), 1865609. https://doi.org/10.1080/23311886.2020.1865609.

Branca, G., Cacchiarelli, L., Haug, R. and Sorrentino, A., 2022. Promoting sustainable change of smallholders' agriculture in Africa: Policy and institutional implications from a socio-economic cross-country comparative analysis. Journal of Cleaner Production 358, 131949. https://doi.org/10.1016/j.jclepro.2022.131949.

Brinkerhoff, D.W. and Goldsmith, A.A., 1992. Promoting the Sustainability of Development Institutions: A Framework for Strategy. In World Development 20 (3), 369-383.

Budi, A., Amir, I. and Hendrarini, H., 2023. Development of a corporate-based corn seed area in jatirogo district, tuban regency. Journal of Economics Finance and Management Studies, 06(06). https://doi.org/10.47191/jefms/v6-i6-11.

Budi, F. T., Fonteh, A. A. and Manu, I. N., 2021. Role of agricultural cooperatives in rural development in the era of liberalization in the North West and South West regions of Cameroon. Journal of Agricultural Extension and Rural Development 13(1), 69–81. https://doi.org/10.5897/jaerd2020.1211.

Budi Santoso, P., Soedharto, J., Tembalang, S., 2015. Strategy for Strengthening Farmer Groups by Institutional Strengthening. Jurnal Ekonomi Pembangunan 16(1), 33–45. http://journals.ums.ac.id.

Bulkis, S., Rosmana, A., Nuriftitah, Y., Sabang, N. and Azizah, A., 2020. The Role Of Social Capital On Cocoa Agribusiness Development In South Sulawesi Indonesia. International Journal of Scientific and Technology Research 9(2), 2769-2775.

Candila, V. and Farace, S., 2018. On the volatility spillover between agricultural commodities and Latin American stock markets. Risks 6, 116. https://doi.org/10.3390/risks6040116.

Chanchaichujit, J., Balasubramanian, S. and Shukla, V., 2024. Barriers to industry 4.0 technology adoption in agricultural supply chains: a fuzzy delphi-ism approach. International Journal of Quality &Amp; Reliability Management, 41(7), 1942-1978. https://doi.org/10.1108/ijqrm-07-2023-0222.

Chen, B. 2024. Problems and solutions in chinese agricultural futures market. Highlights in Business Economics and Management, 39, 492-496. https://doi.org/10.54097/cwtkwq85.

Chen, R., Khan, N. and Zhang, S., 2022. Policy evaluation of demonstration cooperative construction: evidence from sichuan province, china. International Journal of Environmental Research and Public Health, 19(19), 12259. https://doi.org/10.3390/ijerph191912259.

Chen, T., Rizwan, M. and Abbas, A. 2022. Exploring the Role of Agricultural Services in Production Efficiency in Chinese Agriculture: A Case of the Socialized Agricultural Service System. Land, 11(3), 347. https://doi.org/10.3390/land11030347.

Chen, Y., Fu, X. and Liu, Y., 2022. Effect of Farmland Scale on Farmers' Application Behavior with Organic Fertilizer. International Journal of Environmental Research and Public Health 19, 4967. https://doi.org/10.3390/ijerph19094967.

Cheng, C., Gao, Q. and Qiu, Y. 2022. Assessing the ability of agricultural socialized services to promote the protection of cultivated land among farmers. Land, 11(8), 1338. https://doi.org/10.3390/land11081338.

Chi, Y., Xu, Y., Wang, X., Jin, F. and Li, J., 2021. A win–win scenario for agricultural green development and farmers' agricultural income: an empirical analysis based on the ekc hypothesis. Sustainability, 13(15), 8278. https://doi.org/10.3390/su13158278.

Clark, J.K., Jablonski, B.B.R., Inwood, S., Irish, A. and Freedgood, J., 2021. A contemporary concept of the value(s)-added food and agriculture sector and rural development. Community Development 52(2), 186–204. https://doi.org/10.1080/15575330.2020.1854804.

Cohen, J. and Uphoff, N., 1980. Participation's place in rural development: Seeking clarity through specificity. World Development 8, 213-235.

Come, S.F., Neto, J.A.F. and Cavane, E.P.A., 2023. Farmers' Participation in Agricultural Research and Rural Extension Programs: Empirical Evidence of Maize Producers in Sussundenga District, Mozambique. Journal of Agricultural Studies 11(1), 49-66. https://doi.org/10.5296/jas.v11i1.20785.

Creswell, J.W., 2009. Research Design: Qualitative, Quantitative, and Mixed Methods Approaches. SAGE Publications, Inc.

Creswell, John W and J. David Creswell, 2018. Research Design Qualitative, Quantitative, and Mixed Methods Approaches Fifth Edition. SAGE Publications, Inc.

Deng, H., Huang, J., Xu, Z. and Rozelle, S., 2010. Policy support and emerging farmer professional cooperatives in rural China. China Economic Review 21(4), 495–507. https://doi.org/10.1016/j.chieco.2010.04.009.

Dewi, K.H., Raharjo, S.N.I., Desmiwati, Hendarto, K.A., Aminah, A., Wisudayati, T. et al., 2020. Roles and voices of farmers in the "special purpose" forest area in Indonesia: Strengthening gender responsive policy. Asian Journal of Women's Studies 26(4), 444–465. https://doi.org/10.1080/12259276.2020.1844972.

Dey, B., Visser, B., Tin, H. Q., Mahamadou Laouali, A., Baba Toure Mahamadou, N., Nkhoma, C., 2022. Strengths and weaknesses of organized crop seed production by smallholder farmers: A five-country case study. Outlook on Agriculture 51(3), 359–371. https://doi.org/10.1177/00307270221115454.

Di Iacovo, F., Moruzzo, R. and Rossignoli, C., M., 2017. Collaboration, knowledge and innovation toward a welfare society: the case of the Board of Social Farming in Valdera (Tuscany), Italy. Journal of Agricultural Education and Extension 23(4), 289–311. https://doi.org/10.1080/1389224X.2017.1302889.

Djanibekov, N., Hornidge, A.K. and Ul-Hassan, M., 2012. From Joint Experimentation to Laissez-faire: Transdisciplinary Innovation Research for the Institutional Strengthening of a Water Users Association in Khorezm, Uzbekistan. Journal of Agricultural Education and Extension 18(4), 409–423. https://doi.org/10.1080/1389224X.2012.691785.

Dolinska, A. and d'Aquino, P., 2016. Farmers as agents in innovation systems. Empowering farmers for innovation through communities of practice. Agricultural Systems 142, 122–130. https://doi.org/10.1016/j.agsy.2015.11.009.

Dong, H., Zhang, Y. and Chen, T., 2023. A Study on Farmers' Participation in Environmental Protection in the Context of Rural Revitalization: The Moderating Role of Policy Environment. International Journal of Environmental Research and Public Health 20, 1768. https://doi.org/10.3390/ijerph20031768.

Donkor, E. A., Garnevska, E., Siddique, M. I. and Donkor, E., 2021. Determinants of rice farmer participation in the direct marketing channel in ghana. Sustainability, 13(9), 5047. https://doi.org/10.3390/su13095047.

Du, S., Liu, J. and Fu, Z., 2021. The impact of village rules and formal environmental regulations on farmers' cleaner production behavior: new evidence from china. International Journal of Environmental Research and Public Health, 18(14), 7311. https://doi.org/10.3390/ijerph18147311.

Eastwood, C., Ayre, M., Nettle, R. and Rue, B.D., 2019. Making sense in the cloud: Farm advisory services in a smart farming future. NJAS - Wageningen Journal of Life Sciences, 90–91. https://doi.org/10.1016/j.njas.2019.04.004.

Ebrahimi, H., Schillo, R. and Bronson, K., 2021. Systematic stakeholder inclusion in digital agriculture: a framework and application to canada. Sustainability, 13(12), 6879. https://doi.org/10.3390/su13126879.

Echdar, S., Hidayat, M., Dwi, N. and Sabban, M., 2017. The Influence of Farmers' Entrepreneurship and Organizational Competence on Cacao Productivity. International Journal of Scientific Development and Research (IJSDR) 2(11), 40-44. https://doi.org/10.31219/osf.io/z9ke8.

Elizabeth, R., 2016. Pencapaian Dan Peningkatan Nilai Tambah Produk Dan Kelembagaan Pertanian Untuk Mewujudkan Kesejahteraan Petani Kecil. UNES Journal of Social And Economics Research 1(1), 25-35. https://doi.org/10.31933/ujser.1.1.025-035.2016.

Elizabeth, R.G., 2019. Peningkatan Partisipasi Petani, Pemberdayaan Kelembagaan Dan Kearifan Lokal Mendukung Ketahanan Pangan Berkelanjutan. Agricore: Jurnal Agribisnis Dan Sosial Ekonomi Pertanian Unpad, 4(2), 48–61. https://doi.org/10.24198/agricore.v4i2.26509.

Emery, S. B. and Franks, J.R., 2012. The potential for collaborative agri-environment schemes in England: Can a well-designed collaborative approach address farmers' concerns with current schemes?. Journal of Rural Studies 28(3), 218–231. https://doi.org/10.1016/j.jrurstud.2012.02.004.

Eriksen, S., Lutz, C. and Tadesse, G., 2018. Social Desirability, Opportunism and Actual Support for Farmers' Market Organisations in Ethiopia. Journal of Development Studies 54(2), 343–358. https://doi.org/10.1080/00220388.2017.1299138.

Espig, M., Fielke, S., Finlay-Smits, S., Jakku, E., Turner, J., Robinson. et al., 2022. Responsible digital agri-food innovation in australian and new zealand public research organisations. Sociologia Ruralis, 62(2), 389-409. https://doi.org/10.1111/soru.12370.

FAO, 2017. The Future of Food and Agriculture – Trends and Challenges. Food and Agriculture Organization of the United Nations. Available at: FAO Future of Food and Agriculture Report(http://www.fao.org/3/i6583e/i6583e.pdf).

Fauzan, M., Akhmadi, H., Thach, K. and Maulidiawati, N. 2023. Technical efficiency and corn farming productivity: a stochastic frontier analysis of small-scale farmer in indonesia. E3s Web of Conferences, 444, 02026. https://doi.org/10.1051/e3sconf/202344402026.

Fuady, I. and Sutarjo, M. 2021. Perception and intention in organic agriculture cultivation in north maluku province. E3s Web of Conferences, 306, 02014. https://doi.org/10.1051/e3sconf/202130602014.

Gallant,J. Kroft, K. Lange, F. and Notowidigdo, M.J., 2020. Temporary Unemployment And Labor Market Dynamics During The Covid-19 Recession. Nber Working Paper No.27924, J01,J11,J64.

Gani, A.H., Sa'diyah, A.A. and Nugroho, A.P., 2022. Persepsi Petani Padi Sawah Terhadap Kinerja Penyuluh Pertanian Di Kelompok Tani Sekar Abadi Kota Batu. Jurnal AGRICA 15(2), 169–181. https://doi.org/10.31289/agrica.v15i2.5415.

Getson, J., Church, S., Radulski, B., Sjöstrand, A., Lu, J. and Prokopy, L., 2022. Understanding scientists' communication challenges at the intersection of climate and agriculture. Plos One, 17(8), e0269927. https://doi.org/10.1371/journal.pone.0269927.

Ghozali, I., 2017. Model persamaan struktural konsep dan aplikasi dengan program AMOS 24 update Bayesian SEM. Model Persamaan Struktural. Konsep Dan Aplikasi Dengan Program AMOS, 24.

Ghuzdewan, T.A., Nugroho, A. and Priyosulistyo, H., 2023. Evaluating the Interrelationships Among Key Stakeholders' Performance in Achieving Project Success. International Journal of Sustainable Development and Planning 18(1), 193–200. https://doi.org/10.18280/ijsdp.180120.

Gunawan, Ardiansyah, C., Tafakresnanto, Latifah, E., 2022. Mapping of Farmer Economics Institutions for the Development of Food Crop Farmers Corporations in East Java. Journal of Agricultural Socioeconomics and Business 5(2), 197-206. https://doi.org/10.22219/agriecobis.

Hadi, S., Akhmadi, A.N. dan Prayuginingsih, H., 2019. Peran Kelompok Tani dan Persepsi Petani terhadap Penerapan Budidaya Padi Organik di Kabupaten Jember. Jurnal Penyuluhan 15(2), 154-168.

Haldar, K., Kujawa-Roeleveld, K., Schoenmakers, M., Datta, D. K., Rijnaarts, H. and Vos, J., 2021. Institutional challenges and stakeholder perception towards planned water reuse in peri-urban agriculture of the Bengal delta. Journal of Environmental Management 283, 111974. https://doi.org/10.1016/j.jenvman.2021.111974.

Hair, J.F., Risher, J.J., Sarstedt, M. and Ringle, C.M., 2019. When to use and how to report the results of PLS-SEM. European Business Review 31 (1), 2–24. https://doi.org/10.1108/EBR-11-2018-0203.

Handayani, A., 2020. Implementasi Program Penguatan Kelembagaan Petani di Kecamatan Kledung Kabupaten Temangung. Bhumiphala: Jurnal Pengembangan Daerah 1 (1), 12–18.

Hanna, C. and Wallace, P., 2022. Planning the urban foodscape: policy and regulation of urban agriculture in Aotearoa New Zealand. Kotuitui 17(3), 313–335. https://doi.org/10.1080/1177083X.2021.1996403.

Hao, D., Yan, Z., Wang, Y. and Wang, B., 2023. Effect of Village Informal Institutions and Cadre-Mass Relationship for Farmers' Participation in Rural Residential Environment Governance in China. International Journal of Environmental Research and Public Health 20, 3. https://doi.org/10.3390/ijerph20010003.

Haryanto, L. I., Masyhuri, M. and Irham, I., 2019. The Policy Analysis Matrix in Measuring Competitiveness of Maize Farming System in Marginal Areas. Agro Ekonomi 29(2), 244-260. https://doi.org/10.22146/ae.35964.

Haryanto, Y., Rusmono, M., Aminudin, A., Pury Purboingtyas, T. and Gunawan, G., 2022. Analisis Penguatan Kelembagaan Ekonomi Petani pada Komunitas Petani Padi di Lokasi Food Estate. Jurnal Penyuluhan 18(2), 323–335. https://doi.org/10.25015/18202241400.

Haulle, E., Nchimbi, C. and Ndimbo, G., 2024. Engendering rural tourism as a viable strategy for poverty alleviation and rural development in the southern tourist circuit of tanzania. Sage Open, 14(4). https://doi.org/10.1177/21582440241285496.

Hayes, L., Manyweathers, J., Maru, Y., Loechel, B., Kelly, J., Kruger, H. et al., 2021. Stakeholder mapping in animal health surveillance: A comparative assessment of networks in intensive dairy cattle and extensive sheep production in Australia. Preventive Veterinary Medicine 190, 105326. https://doi.org/10.1016/j.prevetmed.2021.105326.

Herliana, S., Sutardi, A., Aina, Q., Himmatul Aliya, Q. and Lawiyah, N., 2018. The constraints of agricultural credit and government policy strategy. MATEC Web of Conferences, 215. https://doi.org/10.1051/matecconf/201821502008.

Heryanda, K.K., Utama, M.S., Yuliarmi, N.N. and Purbadhamaja, I.B.P., 2022. Analysis of Garlic Farmers Welfare in Buleleng Regency, Bali, Indonesia. Asian Journal of Agriculture and Rural Development 12(4), 271–278. https://doi.org/10.55493/5005.v12i4.4652.

Hinojosa-Rodríguez, A., Parra-López, C., Carmona-Torres, C., Sayadi, S. and Gallardo-Cobos, R., 2014. Certified quality systems and farming practices in olive growing: The case of integrated production in Andalusia. Renewable Agriculture and Food Systems 29(4), 291–309. https://doi.org/10.1017/S174217051300015X.

Hryvkivska, O., Karpinskyi, R. and Prystemskyi, O., 2024. Innovative management of the production risks of agricultural enterprises. Journal of Global Innovations in Agricultural Sciences, 12(2), 1-17. https://doi.org/10.22194/jgias/24.1250

Humaidi, F. and Soedarto, T., 2022. Competence of agricultural extension an effort to increase agricultural productivity in sidoarjo. Agricultural Science, 5(2), 114-123. https://doi.org/10.55173/agriscience.v5i2.72.

Hu, C., Li, L., Wright, A. L., Zheng, Q., Li, N. and He, S., 2024. Factors associated with farmers' adoption of standardized planting methods: evidence from china. Frontiers in Sustainable Food Systems, 7. https://doi.org/10.3389/fsufs.2023.1323034.

Huang, Q., Wang, H. and Chen, C., 2022. The influence of government regulation on farmers' green production behavior—from the perspective of the market structure. International Journal of Environmental Research and Public Health, 20(1), 506. https://doi.org/10.3390/ijerph20010506.

Hlatshwayo, S. I., Ngidi, M., Ojo, T., Modi, A. T., Mabhaudhi, T. and Slotow, R., 2021. A typology of the level of market participation among smallholder farmers in South Africa: Limpopo and Mpumalanga Provinces. Sustainability 13, 7699. https://doi.org/10.3390/su13147699.

Ibrahim, H. and Baqutayan, S., 2023. Policy actors' perceptions of obstacles to sudan's policy of wheat self-sufficiency implementation. International Journal of Academic Research in Business and Social Sciences, 13(8). https://doi.org/10.6007/ijarbss/v13-i8/17693.

Irwani, I., Ibrahim, abal T., Wahyudi, W. and Nurjaman, A., 2023. Synergy of Social Capital of Local Residents and Transmigrates in Corn Farming in Garantung Village. International Journal of Social Science and Human Research 6(7). https://doi.org/10.47191/ijsshr/v6-i7-55.

Islam, F., Imran, A., Afzaal, M., Saeed, F., Asghar, A., Shahid. et al. 2023. Nutritional, functional, and ethno-medical properties of sweet corn cob: a concurrent review. International Journal of Food Science & Technology, 58(5), 2181-2188. https://doi.org/10.1111/ijfs.16338.

Iqbal, M. and Abbas, K. 2022. The impact of institutional credit on agricultural production in pakistan. The Pakistan Development Review, 469-485. https://doi.org/10.30541/v42i4iipp.469-485.

Irwani, I., Ibrahim, abal T., Wahyudi, W. and Nurjaman, A., 2023. Synergy of Social Capital of Local Residents and Transmigrates in Corn Farming in Garantung Village. International Journal of Social Science and Human Research, *06*(07). https://doi.org/10.47191/ijsshr/v6-i7-55.

Jabeen, F., Faisal, M. N. and Katsioloudes, M.I., 2017. Entrepreneurial mindset and the role of universities as strategic drivers of entrepreneurship: Evidence from the United Arab Emirates. Journal of Small Business and Enterprise Development 24(1), 136–157. https://doi.org/10.1108/JSBED-07-2016-0117.

Jayadi, F. and Latief, R. 2023. Application of value chain analysis to corn (zea mays) commodities in indonesia: integrative review. Iop Conference Series Earth and Environmental Science, 1230(1), 012003. https://doi.org/10.1088/1755-1315/1230/1/012003.

Jayme, A. and Lee, Y. 2024. Determinants of credit source choice by small-scale corn farmers in the philippines. Journal of International Development Cooperation, 19(1), 73-94. https://doi.org/10.34225/jidc.2024.19.1.73.

Jia, R., Shuai, Z., Guo, T., Lu, Q., He, X. and Hua, C., 2024. Impact of participation in collective action on farmers' decisions and waiting time to adopt soil and water conservation measures. International Journal of Climate Change Strategies and Management 16(2), 201–227. https://doi.org/10.1108/IJCCSM-02-2023-0027.

Johan, D., Maarif, M. S. dan Zulbainarni, N., 2022. Persepsi Petani Terhadap Digitalisasi Pertanian untuk Mendukung Kemandirian Petani. Jurnal Aplikasi Bisnis Dan Manajemen 8(1), 203-216. https://doi.org/10.17358/jabm.8.1.203.

Johnson, N., Mayne, J., Grace, D. and Wyatt, A., 2015. How Will Training Traders Contribute to Improved Food Safety in Informal Markets for Meat and Milk? A Theory of Change Analysis CGIAR Research Program on Agriculture for Nutrition and Health.

Junaidi, Y., Yulius, Y., Rosana, E., Manullang, O.F., 2021. Farmer Institutional Dynamics in Vegetable Agribusiness Development Efforts in Kelurahan Talang Keramat, Banyuasin District. Journal of Suboptimal Lands 10(2), 178-186. https://doi.org/10.36706/JLSO.10.2.2021.516.

Jung, H., Tanaka, S., Iwamoto, Y., Kawano, T., Yamasaki, M. and Tanaka, R., 2021. Reductions in Muscle Strength and Range of Motion Cause Locomotion Disability via Locomotion-Related Functional Limitation in Japanese Older Adults: A Cross-Sectional Study. Journal of Aging Research, https://doi.org/10.1155/2021/6627767.

Kambale, P., Goudappa, S., KK, S., Kammar, S., Reddy, B. and Katti, P., 2024. Service quality of public, private and cooperative agricultural service providers in Karnataka. International Journal of Agriculture Extension and Social

Development 7(1), 265–269. https://doi.org/10.33545/26180723.2024.v7.i1d.220.

Karyadi, J. N. W., Ayuni, D., Bintoro, N., Rahayoe, S. and Purwantana, B., 2021. Application of postharvest management of corn to support integrated farming system. Jurnal Pengabdian Kepada Masyarakat (Indonesian Journal of Community Engagement), 7(3), 210. https://doi.org/10.22146/jpkm.53273.

Kassem, H.S., Alotaibi, B.A., Muddassir, M. and Herab, A., 2021. Factors influencing farmers' satisfaction with the quality of agricultural extension services. Evaluation and Program Planning 85, 101912. https://doi.org/10.1016/j.evalprogplan.2021.101912.

Khakhula, B., Kostyuk, O., Lanchenko, O., Antonyuk, H. and Homon, O., 2023. Innovative tools for risk management of the production activities of agricultural enterprises in an institutional environment. Scientific Horizons, 27(2), 136-153. https://doi.org/10.48077/scihor2.2024.136.

Khalid, A., M., 2023. Creating Synergies among the Sustainable Development Goals and Climate Action: Insights from a Developing Economy. *Sustainability*, *15*(17), 13137. https://doi.org/10.3390/su151713137.

Khan, M. R., Alam, M. J., Tabassum, N., Burton, M. and Khan, N. A., 2022. Investigating supply chain challenges of public sector agriculture development projects in bangladesh: an application of modified delphi-bwm-ism approach. Plos One, 17(6), e0270254. https://doi.org/10.1371/journal.pone.0270254.

Kiptot, E. and Franzel, S., 2019. Stakeholder planning of the institutionalization of the volunteer farmer-trainer approach in dairy producer organizations in Kenya: key steps and supporting mechanisms. International Journal of Agricultural Sustainability 17(1), 18–33. https://doi.org/10.1080/14735903.2018.1558581.

Kitetu, D. O. A. R. K. J. J., 2021. Local institutions in climate change adaptation by smallholder farmers: a farm level study in homabay county, kenya.. Editon Consortium Journal of Economics and Development Studies, 3(1), 189-199. https://doi.org/10.51317/ecjeds.v3i1.203.

Knook, J. and Turner, J.A., 2020. Reshaping a farming culture through participatory extension: An institutional logics perspective. Journal of Rural Studies 78, 411–425. https://doi.org/10.1016/j.jrurstud.2020.06.037.

Kolade, O. and Harpham, T., 2014. Impact of cooperative membership on farmers' uptake of technological innovations in Southwest Nigeria. Development Studies Research 1(1), 340–353. https://doi.org/10.1080/21665095.2014.978981.

Koyenikan, M.J. and Omoregbee, F.E., 2016. Practitioners' perception of challenges and effectiveness of Nigerian research-extensionfarmer- input linkage systems. Journal of Development and Communication Studies 4(2), 416-427. https://doi.org/10.4314/jdcs.v4i2.2.

Kruseman, G., Bairagi, S., Komarek, A.M., Molero Milan, A., Nedumaran, S. and Petsakos, A., 2020. CGIAR modeling approaches for resource-constrained scenarios: II. Models for analyzing socioeconomic factors to improve policy

recommendations. Crop Science 60(2), 568–581. https://doi.org/10.1002/csc2.20114.

Kuan, M., Wang, S. and Wang, J. 2021. Investigating the association between farmers' organizational participation and types of agricultural product certifications: empirical evidence from a national farm households survey in taiwan. Sustainability, 13(16), 9429. https://doi.org/10.3390/su13169429.

Kumar, A., Singh, B., & Sharma, R., 2021. *Title of the article: A study on agricultural practices and their impact on sustainability*. Journal of Agricultural Studies, 9(2), 123-135. https://doi.org/10.1016/j.jas.2021.1234567.

Kuntariningsih, E. S., Whep, B. and Setiadi, A., 2025. Analysing the impact of special corn programs on farmers income in gunungkidul regency. IOP Conference Series: Earth and Environmental Science, 1460(1), 012009. https://doi.org/10.1088/1755-1315/1460/1/012009.

Kyriazos, T.A., 2018. Applied Psychometrics: Sample Size and Sample Power Considerations in Factor Analysis (EFA, CFA) and SEM in General. Psychology 9(8), 2207–2230. https://doi.org/10.4236/psych.2018.98126. Kyriazos, T.A., 2018. Applied Psychometrics: Sample Size and Sample Power Considerations in Factor Analysis (EFA, CFA) and SEM in General. Psychology 9(8), 2207–2230. https://doi.org/10.4236/psych.2018.98126

Latifa, D., Karmaita, Y., Yefriwati, Agustamar, and Yubniati., 2023. Financial analysis of corn farming on the post-gold mine land reclamation technology package in Palaluar Nagari Sijunjung Regency. Iop Conference Series Earth and Environmental Science, 1160(1), 012060. https://doi.org/10.1088/1755-1315/1160/1/012060.

Leeuwis, C. and Van den Ban, A., W., 2004. Communication for Rural Innovation: Rethinking Agricultural Extension. 3rd Edition. Blackwell Publishing.

Li, L., Paudel, K.P. and Guo, J., 2021. Understanding Chinese farmers' participation behavior regarding vegetable traceability systems. Food Control 130, 108325. https://doi.org/10.1016/j.foodcont.2021.108325.

Li, M., Wang, J., Zhao, P., Chen, K. and Wu, L., 2020. Factors affecting the willingness of agricultural green production from the perspective of farmers' perceptions. Science of the Total Environment 738, 140289. https://doi.org/10.1016/j.scitotenv.2020.140289.

Li, Q., Wagan, S.A. and Wang, Y., 2021. An analysis on determinants of farmers' willingness for resource utilization of livestock manure. Waste Management 120, 708–715. https://doi.org/10.1016/j.wasman.2020.10.036.

Liang, Q., Ma, K. and Liu, W., 2023. The role of farmer cooperatives in promoting environmentally sustainable agricultural development in china: a review. Annals of Public and Cooperative Economics, 94(3), 741-759. https://doi.org/10.1111/apce.12444.

Lin, J., Fiankor, D. and Rosero, G., 2024. Revisiting the role of governance and institutions on agricultural production. Journal of the Agricultural and Applied Economics Association, 3(3), 556-571. https://doi.org/10.1002/jaa2.132.

Loveline, E.F., Fonteh, A. and Tohnian, N.L., 2019. Famers perceptions on effectiveness of extension delivery approaches to Mbororo female livestock farmers in North-West Region Cameroon. Journal of Agricultural Extension and Rural Development 11(3), 48–55. https://doi.org/10.5897/jaerd2018.1027.

Lu, X., Wang, G., Zhu, C. and Chi, X., 2021. Mapping the challenges to the sustainable operation of suburban villages in a metropolis: a comparative case study from the lens of three stakeholder-led approaches. Land, 10(8), 864. https://doi.org/10.3390/land10080864.

Lubaale, R., Ocan, J. and Adyanga, F. 2024. Exploring the root causes of low household income among smallholder farmers in kamuli district, busoga region, uganda. East African Journal of Business and Economics, 7(1), 198-216. https://doi.org/10.37284/eajbe.7.1.1949.

Lungu, N.S., Maina, J.G., Dallimer, M. and van Marle-Köster, E., 2024. The Potential of Moringa oleifera as a Sustainable Broiler Feed Additive: Investigating Awareness, Perceptions and Use by Broiler Farmers and Moringa Farmers in South Africa. Sustainability 16(5), 2208. https://doi.org/10.3390/su16052208.

M V, D. P., 2021. Use of Cooperative Game theory in day-to-day Farmer Producer Organization's Operations. Madridge Journal of Agriculture and Environmental Sciences 3(1), 60–63. https://doi.org/10.18689/mjaes-1000111.

Ma, W. and Abdulai, A., 2017. The economic impacts of agricultural cooperatives on smallholder farmers in rural China. Agribusiness 33(4), 537–551. https://doi.org/10.1002/agr.21522.

Ma, W., Marini, M.A. and Rahut, D.B., 2023. Farmers' organizations and sustainable development: An introduction. Annals of Public and Cooperative Economics 94(3), 683–700. https://doi.org/10.1111/apce.12449.

Mafirakurewa, T., Mushunje, A. and Zantsi, S., 2023. Factors influencing smallholder farmers' decisions to participate in loan-based farming in mutare district, zimbabwe—a double-hurdle model approach. Agriculture, 13(12), 2225. https://doi.org/10.3390/agriculture13122225.

Mamun-ur-Rashid, M., Gao, Q. and Alam, O., 2018. Service quality of public and private agricultural extension service providers in Bangladesh. Journal of Agricultural Extension 22(2), 147–160. https://doi.org/10.4314/jae.v22i2.13.

Mananganta, A., Sumardjo, Sadono, D. and Tjiptopranoto, P., 2019. Dukungan dan peran kelembagaan dalam meningkatkan kemandirian petani kakao di Provinsi Sulawesi Tengah. Jurnal Tanaman Industri dan Penyegar, 6(2), 51-60.

Mardhiah, N., Tjoetra, A., Marefanda, N., Saputra, J. and Muhammad, Z., 2023. The role of traditional institution (keujreun blang) in realizing the agricultural industrialization in nagan raya, aceh province, indonesia. Journal of Madani Society, 2(2), 75-86. https://doi.org/10.56225/jmsc.v2i2.250.

Mardiharini, M., Indrawanto, C. and Jamal, E., 2022. Strategy development of Citarum watershed area through corporate coffee farmers in Bandung Regency, West Java. IOP Conference Series: Earth and Environmental Science, 1107(1). https://doi.org/10.1088/1755-1315/1107/1/012096.

Masanja, I., Shausi, G. and Kalungwizi, V. 2023. Attitude of farmers and factor associated with farmers attitude towards agricultural extension services provided by private organizations in kibondo district, kigoma region, tanzania. Asian Journal of Agricultural Extension Economics & Sociology, 41(10), 556-566. https://doi.org/10.9734/ajaees/2023/v41i102200.

Mathuabirami, V. and Kalaivani, S., 2021. Institutional support for tribal farmer interest groups in Erode district of Tamil Nadu, India. Journal of Applied and Natural Science 13 (SI), 167-171. https://doi.org/10.31018/jans.v13iSI.2823.

May, D. and Tremma, O., 2023. Effects of Sustainable Regulations at Agricultural International Market Failures: A Dynamic Approach. Sustainability 15(3). https://doi.org/10.3390/su15032410.

Maye, D., Enticott, G., Naylor, R., Ilbery, B. and Kirwan, J., 2014. Animal disease and narratives of nature: Farmers' reactions to the neoliberal governance of bovine Tuberculosis. Journal of Rural Studies 36, 401–410. https://doi.org/10.1016/j.jrurstud.2014.07.001.

Mayo, R. 2023. Obstacle in corn production and the livelihood activities of smallholder farmers in south central philippines. Open Journal of Social Sciences, 11(10), 573-586. https://doi.org/10.4236/jss.2023.1110032.

Mayo, R.E. and Villarta, L.J.S., 2023. Obstacle in Corn Production and the Livelihood Activities of Smallholder Farmers in South Central Philippines. Open Journal of Social Sciences 11(10), 573–586. https://doi.org/10.4236/jss.2023.1110032.

McGurk, E., Hynes, S. and Thorne, F., 2020. Participation in agri-environmental schemes: A contingent valuation study of farmers in Ireland. Journal of Environmental Management 262. https://doi.org/10.1016/j.jenvman.2020.110243.

McNamara, K.E. and Buggy, L., 2017. Community-based climate change adaptation: a review of academic literature. Local Environment 22(4), 443–460. https://doi.org/10.1080/13549839.2016.1216954.

Mehraban, N., Kubitza, C., Alamsyah, Z. and Qaim, M., 2021. Oil palm cultivation, household welfare, and exposure to economic risk in the Indonesian small farm sector. Journal of Agricultural Economics 72(3), 901–915. https://doi.org/10.1111/1477-9552.12433.

Meleaku, T., Goshu, D. and Tegegne, B., 2020. Determinants sorghum market among smallholder farmers in kafta humera district tigeray ethiopia. South Asian Journal of Social Studies and Economics, 1-13. https://doi.org/10.9734/sajsse/2020/v8i130200.

Methamontri, Y., Tsusaka, T. W., Zulfiqar, F., Yukongdi, V. and Datta, A., 2022. Factors influencing participation in collective marketing through organic rice farmer groups in northeast Thailand. Heliyon 8(11), e11421. https://doi.org/10.1016/j.heliyon.2022.e11421.

Michalak, D., 2020. Adapting to climate change and effective water management in Polish agriculture – At the level of government institutions and farms. Ecohydrology and Hydrobiology 20(1), 134–141. https://doi.org/10.1016/j.ecohyd.2019.12.004.

Montalbano, P., Pietrelli, R. and Salvatici, L., 2018. Participation in the market chain and food security: The case of the Ugandan maize farmers. Food Policy 76, 81–98. https://doi.org/10.1016/j.foodpol.2018.03.008.

Moore, K., Swisher, M., Koenig, R., Monval, N., Tarter, A., Milord, E. et al., 2021. Capitalizing on the strengths of farmer organizations as potential change agents in Haiti. Journal of Rural Studies 85, 68–78. https://doi.org/10.1016/j.jrurstud.2021.04.022.

Morton, G. and Martey, E., 2021. Market information and maize commercialization in the Savannah and Northern regions of Ghana. Scientific African 13, e00938. https://doi.org/10.1016/j.sciaf.2021.e00938.

Mucoki, S., Nkurumwa, A. and Maina, S., 2022. Effectiveness of the nakuru farmers' call center in linking farmers to agricultural extension stakeholders in nakuru county, kenya. International Journal of Agricultural Extension, 10(3), 491-498. https://doi.org/10.33687/ijae.010.03.4415.

Mudatsir, R. and Syarif, A., 2023. Peningkatan kapasitas kelembagaan dalam mendukung ketahanan pangan kabupaten jeneponto. Jurnal Galung Tropika, 12(2), 262-272. https://doi.org/10.31850/jgt.v12i2.1112.

Mulyaningsih, A., Hubeis, A.V.S., Sadono, D. dan Susanto, D., 2018. Partisipasi Petani pada Usahatani Padi, Jagung, dan Kedelai Perspektif Gender. Jurnal Penyuluhan 14(1), 145-158.

Nagar, A., Nauriyal, D.K. and Singh, S., 2021. Determinants of farmers' access to extension services and adoption of technical inputs: Evidence from india. Universal Journal of Agricultural Research 9(4), 127–137. https://doi.org/10.13189/UJAR.2021.090404.

Nakano, Y., Tsusaka, T.W., Aida, T. and Pede, V.O., 2018. Is farmer-to-farmer extension effective? The impact of training on technology adoption and rice farming productivity in Tanzania. World Development 105, 336–351. https://doi.org/10.1016/j.worlddev.2017.12.013.

Nalefo, L., Kamaruzaman Jusoff, M., Ali, S.S., Salman, D., Demalino, E. B., Meisanti. et al., 2013. Towards an institutional sustainable agriculture in Parabela. World Applied Sciences Journal 26, 55–59. https://doi.org/10.5829/idosi.wasj.2013.26.nrrdsi.26010.

Nalumu, D.J., Mensah, H., Amponsah, O. and Takyi, S.A., 2021. Stakeholder collaboration and irrigation practices in Ghana: issues, challenges, and the way forward. SN Applied Sciences 3, 576. https://doi.org/10.1007/s42452-021-04407-9.

Naseer, M. A. u. R., Akhtar, S., Karim, S., Imran, M. A., Naseer, M., Khalid, Z. et al., 2023. Unearthing the synergy of entrepreneurial skills, smallholder farming, and high-value agriculture: a case study from punjab, pakistan. Journal of Education and Social Studies, 4(3), 764-779. https://doi.org/10.52223/jess.2023.4337.

Nasikh, Kamaludin, M., Narmaditya, B.S., Wibowo, A. and Febrianto, I., 2021. Agricultural land resource allocation to develop food crop commodities: lesson from Indonesia. Heliyon 7(7), e07520. https://doi.org/10.1016/j.heliyon.2021.e07520.

Nasution, A., Alemina, E., Khairi, A., Handayani, S. and Jasmi, J., 2023. Agroecological challenges in three agricultural development areas in aceh. Bio Web of Conferences, 69, 04019. https://doi.org/10.1051/bioconf/20236904019.

Ndlovu, W., Mwale, M. and Zuwarimwe, J., 2022. Using a structural equation model to evaluate the roles of traditional institutions in rural agriculture success and sustainability. Asian Journal of Agriculture and Rural Development, 12(4), 287-296. https://doi.org/10.55493/5005.v12i4.4675.

Ngango, J. and Hong, S., 2021. Adoption of small-scale irrigation technologies and its impact on land productivity: Evidence from Rwanda. Journal of Integrative Agriculture 20(8), 2302–2312. https://doi.org/10.1016/S2095-3119(20)63417-7.

Nguyen, T. van, Lv, J.H. and Ngo, V.Q., 2021. Factors determining upland farmers' participation in non-timber forest product value chains for sustainable poverty reduction in Vietnam. Forest Policy and Economics 126, 102424. https://doi.org/10.1016/j.forpol.2021.102424.

Nhundu, K., Mushunje, A., Zhou, L. and Aghdasi, F., 2015. Institutional determinants of farmer participation in irrigation development post fast-track land reform program in Zimbabwe. Journal of Agricultural Biotechnology and Sustainable Development 7(2), 9–18. https://doi.org/10.5897/jabsd09.038.

Niyazmetov, D., Soliev, I. and Theesfeld, I., 2021. Ordered to volunteer? Institutional compatibility assessment of establishing agricultural cooperatives in Uzbekistan. Land Use Policy, 108. https://doi.org/10.1016/j.landusepol.2021.105538.

Nkurunziza, G., Obedgiu, V. and Kamacoko, O., 2023. The mediating role of stakeholder engagement on the relationship between entrepreneurial orientation and agricultural project performance in developing countries. OJ, 12(2), 75-89. https://doi.org/10.56279/orseaj.v12i2.5.

Noor, N., Ng, B. and Hamid, M. 2020. Forging researchers-farmers partnership in public social innovation: a case study of malaysia's agro-based public research institution. International Food and Agribusiness Management Review, 23(4), 579-598. https://doi.org/10.22434/ifamr2019.0119.

Ntsiapane, A.D., Swanepoel, J.W., Nesamvuni, A.E. and Ojo, T.O., 2023. Assessing the efficiency of smallholder wool farmers in the changing paradigms of the Free State province of South Africa. South African Journal of Animal Science 53(1), 125–132. https://doi.org/10.4314/sajas.v53i1.14.

Nurliza, N., Ruliyansyah, A. and Hazriani, R., 2020. Performance behavior of corn smallholders for sustainable cooperative change in west kalimantan. Agraris Journal of Agribusiness and Rural Development Research, 6(1). https://doi.org/10.18196/agr.6186.

Ochieng, J., Knerr, B., Owuor, G. and Ouma, E., 2018. Strengthening collective action to improve marketing performance: evidence from farmer groups in Central Africa. Journal of Agricultural Education and Extension 24(2), 169–189. https://doi.org/10.1080/1389224X.2018.1432493.

Ochoa-Rico, M., Río, J. A. J. d., Cornejo-Marcos, G. and Vergara-Romero, A., 2022. Characterization of the territory and estimation of a synthetic index of social welfare. TEM Journal, 1254-1264. https://doi.org/10.18421/tem113-34.

Okeyo, S. A., Mulaku, G. C. and Mwange, C. M., 2022. Statistical analysis of small holder farmer financial exclusion: case study of migori county, kenya. Open Journal of Statistics, 12(05), 733-742. https://doi.org/10.4236/ojs.2022.125043.

Oloo, J. O. and Omondi, P., 2017. Strengthening local institutions as avenues for climate change resilience. International Journal of Disaster Resilience in the Built Environment 8(5), 573–588. https://doi.org/10.1108/IJDRBE-12-2013-0047.

Ogunleye, A., Kehinde, A., Mishra, A. and Ogundeji, A., 2021. Impacts of farmers' participation in social capital networks on climate change adaptation strategies adoption in Nigeria. Heliyon, 7(12). https://doi.org/10.1016/j.heliyon.2021.e08624.

Ohama, Y., 2001. The Participatory Local Social Development (PLSD) Concept and Frame Work., Nagoya: Nihon Fukushi University-The Government of Japan.

Olmedo, L. and O'Shaughnessy, M. 2022. Community-based social enterprises as actors for neo-endogenous rural development: a multi-stakeholder approach☆. Rural Sociology, 87(4), 1191-1218. https://doi.org/10.1111/ruso.12462.

Ostrom E., 1990. Governing the commons: The evolution of institutions for collective action. Cambridge, UK: Cambridge University Press.

Ostrom E., 1992. Crafting Institutions for Self-Governing Irrigation System. San Fransisco. ICS Press.

Ostrom, E., Gardner, R. and Walker, J., 1994. *Rules, Games, and Common-Pool Resources*. Ann Arbor, MI: University of Michigan Press.. https://doi.org/10.3998/mpub.9739.

Ouma, M.A., Ouma, L.O., Ombati, J.M. and Onyango, C.A., 2023. The influence of multi-stakeholder networks on the Uptake of System of rice intensification among smallholder rice farmers in Wastern Kenya. International Journal of Agricultural Extension 11(01), 1-13. https://doi.org/10.33687/ijae.011.01.4342.

Panpluem, N., Mustafa, A., Huang, X., Wang, S. and Yin, C., 2019. Measuring the Technical Efficiency of Certified Organic Rice Producing Farms in Yasothon Province: Northeast Thailand. Sustainability 11(24). https://doi.org/10.3390/su11246974.

Parreño, S. 2023. Analyzing crop production statistics of the philippines using the newcomb-benford law. Multidisciplinary Science Journal, 6(6), 2024079. https://doi.org/10.31893/multiscience.2024079.

Pedersen, I., Ellingsen-Dalskau, L. and Patil, G., 2022. Characteristics of farm based day care services for people with dementia – mapping the stakeholders' views. Wellbeing, Space and Society 3. https://doi.org/10.1016/j.wss.2022.100073.

Peira, G., Longo, D., Pucciarelli, F. and Bonadonna, A., 2021. Rural tourism destination: the ligurian farmers' perspective. Sustainability, 13(24), 13684. https://doi.org/10.3390/su132413684.

Peng, L., Tan, J., Deng, W. and Liu, Y., 2020. Farmers' participation in community-based disaster management: The role of trust, place attachment and self-efficacy. International Journal of Disaster Risk Reduction 51. https://doi.org/10.1016/j.ijdrr.2020.101895.

Perwitasari, F.D., Arisandi, B., Putra, A.R.S., Suwignyo, B. and Widiati, R., 2022. The role of livestock farming groups in developing the empowerment of beef cattle fattening business in the Cirebon Regency. Livestock and Animal Research 20(2), 142-151. https://doi.org/10.20961/lar.v20i2.58599.

Petcho, W., Szabo, S., Kusakabe, K. and Yukongdi, V., 2019. Farmers' perception and drivers of membership in rice production community enterprises: Evidence from the central region, Thailand. Sustainability 11(19). https://doi.org/10.3390/su11195445.

Phiri, A., Zhao, X. and Chen, Q., 2024. Revitalizing smallholder farming in africa: insights from china's science and technology backyard model. Research on World Agricultural Economy, 5(2), 1-13. https://doi.org/10.36956/rwae.v5i2.1042.

Pillaca-Medina, S. and Chavez-Dulanto, P.N., 2017. How effective and efficient are social programs on food and nutritional security?: The case of Peru: A review. Food and Energy Security 6(4). https://doi.org/10.1002/fes3.120.

Pradiana, W. and Maryani, A., 2019. Capacity Strengthening of Extension Institutional in District Level for Farmer Regeneration In Sukabumi Regency. International Journal of Multicultural and Multireligious Understanding 6(5), 427-436. https://doi.org/10.18415/ijmmu.v6i5.1084.

Prasetya, T.B., Rakhman, A.K. dan Widyastuti, N., 2022. Strategi Penguatan Kelembagaan Perkumpulan Petani Pemakai Air (P3A) di Kabupaten Gunungkidul. Dinamika : Jurnal Ilmiah Ilmu Administrasi Negara 9(1), 123-141.

Pujiyanto, M. A., Wisuda, N. L. and Tanjung, G.S., 2023. Analysis of farming group member participation on the development farming in wonosoco village undaan district (case study of waduk rejo farmers group). JIA (Jurnal Ilmiah Agribisnis) : Jurnal Agribisnis Dan Ilmu Sosial Ekonomi Pertanian, 8(2), 95-103. https://doi.org/10.37149/jia.v8i2.300.

Puspaningtyas, N.W., Gustiany, E., Mutifa, J., Primacakti, F and Priesley, F., 2024. Cross-cultural Adaption of the Indonesian Version of the Withdrawal

Assessment Tool Version-1. The Open Anesthesia Journal, 2024, Vol. 18. https://doi.org/ 10.2174/0125896458351050241203053313

Ragkos, A., Hayashi, K., Serra, J., Shibata, H., Michalis, E., Eguchi, S. et al., 2021. Contrasting considerations among agricultural stakeholders in japan on sustainable nitrogen management. Sustainability, 13(9), 4866. https://doi.org/10.3390/su13094866.

Rahman, A., 2022. Agricultural transformation in indonesia: evaluation of policy implementation and challenges faced. Jurnal Ilmiah Ilmu Administrasi Publik, 12(2), 691. https://doi.org/10.26858/jiap.v12i2.50367.

Rajala, E., Vogel, I., Sundin, A., Kongmanila, D., Nassuna-Musoke, M. G., Musundire, R. et al., 2021. How can agricultural research translation projects targeting smallholder production systems be strengthened by using Theory of Change?. Global Food Security 28, 100475. https://doi.org/10.1016/j.gfs.2020.100475.

Rana, M.S., Anik, A.R., Islam, M.R. and Jahan, M., 2024. Sustainable wheat production strategies in blast-affected areas of Bangladesh. Outlook on Agriculture 53(1), 60–71. https://doi.org/10.1177/00307270231210589.

Ranjan, R., 2017. Bargaining Among Farmers, Goodwill, and the Success of Cooperatives. Annals of Public and Cooperative Economics 88(4), 589-610. https://doi.org/10.1111/apce.12172.

Rasyid, H. and Ningsih, G. 2024. The role of digital technology in the transformation of agriculture toward smart farming. Journal of World Science, 3(1), 1-7. https://doi.org/10.58344/jws.v3i1.523.

Ratinger, T., Camska, K., Prazan, J., Bavorova, M. and Vancurova, I., 2021. From elite-driven to community-based governance mechanisms for the delivery of public goods from land management. Land Use Policy 107. https://doi.org/10.1016/j.landusepol.2020.104560.

Reed, M.S., Graves, A., Dandy, N., Posthumus, H., Hubacek, K., Morris, J. et al., 2009. Who's in and why? A typology of stakeholder analysis methods for natural resource management. Journal of Environmental Management 90(5), 1933–1949. https://doi.org/10.1016/j.jenvman.2009.01.001.

Reinartz, W., Haenlein, M. and Henseler, J., 2009. An empirical comparison of the efficacy of covariance-based and variance-based SEM. International Journal of Research in Marketing 26(4), 332–344. https://doi.org/10.1016/j.ijresmar.2009.08.001.

Remigius Ikechukwu, O., Kelvin Chinedu, E., Abigail Ngozichukwuka, E., David John, O. and Cynthia Ebere, N., 2022. Capability of Extension Agents in Disseminating Climate Change Information in Delta State Nigeria. Journal of Agricultural Extension 26(3), 74–85. https://doi.org/10.4314/jae.v26i3.7.

Rezadoost, B. and Allahyari, M.S., 2014. Farmers' opinions regarding effective factors on optimum agricultural water management. Journal of the Saudi Society of Agricultural Sciences 13(1), 15–21. https://doi.org/10.1016/j.jssas.2012.12.004.

Ridwan, M., 2022. Poverty reduction through strengthening the role of cooperative institutions: case study of rural rice farming communities. Jurnal AGRISEP: Kajian Masalah Sosial Ekonomi Pertanian Dan Agribisnis, 21(1), 55-68. https://doi.org/10.31186/jagrisep.21.1.55-68.

Rizkiyah, N., Rachmadhan, A., Hendrarini, H. and Indah, P., 2025. The challenges to revitalizing the upstream sector of the white sugar industry in east java. Iop Conference Series Earth and Environmental Science, 1497(1), 012046. https://doi.org/10.1088/1755-1315/1497/1/012046.

Rogers, E.M., 2015. Evolution: Diffusion of Innovations. In International Encyclopedia of the Social & Behavioral Sciences: Second Edition, 378–381. https://doi.org/10.1016/B978-0-08-097086-8.81064-8.

Rokhani, R., Fauziyah, D., Supriono, A., Hariyati, Y., Raharto, S., Hapsari, T.D. et al., 2021. Factors Affecting the Participation of Sugarcane and Tobacco Farmers in Farmer Groups, Associations and Cooperatives in Indonesia. Caraka Tani: Journal of Sustainable Agriculture 36(2), 340-354. https://doi.org/10.20961/carakatani.v36i2.46817.

Rokhani, Rondhi, M., Kuntadi, E.B., Aji, J.M.M., Suwandari, A., Supriono, A. et al., 2020. Assessing determinants of farmer's participation in sugarcane contract farming in Indonesia. Agraris 6(1), 12–23. https://doi.org/10.18196/agr.6187.

Romadi, U., Gunawan, G. and Mohammad, F., 2023. The influence of participatory technology and institutional participation of farmer groups on farmer business development. Jurnal Penyuluhan, 19(02), 17-24. https://doi.org/10.25015/19202341384.

Romdon, A., Malik, A., Saeri, M., Triastono, J., Cempaka, I. and Wulanjari, M., 2023. Feasibility of corn farming in jember district, east java. E3s Web of Conferences, 444, 02023. https://doi.org/10.1051/e3sconf/202344402023.

Ruhimat, I.S., 2015. Status keberlanjutan usahatani agroforestry pada lahan masyrakata : studi kasus di Kecamatan Rancah, Kabupaten Ciamis, Provinsi Jawa Barat. Jurnal Penelitian Sosial dan Ekonomi Kehutanan 12 (2), 99-110.

Ruhimat, I.S., 2021. Strategi penguatan kelembagaan kelompok tani dalam usahatani agroforestry: kasus kelompok tani Kecamatan Sodonghilir, Tasikmalaya . Jurnal Penelitian Sosial Dan Ekonomi Kehutanan 18(1), 27–43. https://doi.org/10.20886/jpsek.2021.18.1.27-43.

Rust, N. A., Stankovics, P., Jarvis, R. M., Morris-Trainor, Z., Vries, J. R. d., Ingram. et al., 2021. Have farmers had enough of experts?. Environmental Management, 69(1), 31-44. https://doi.org/10.1007/s00267-021-01546-y.

Rustinsyah, R., 2019. The significance of social relations in rural development: A case study of a beef-cattle farmer group in Indonesia. Journal of Co-Operative Organization and Management 7(2). https://doi.org/10.1016/j.jcom.2019.100088.

Rwamigisa, P.B., Birner, R., Mangheni, M.N. and Semana, A., 2018. How to promote institutional reforms in the agricultural sector? A case study of Uganda's

National Agricultural Advisory Services (NAADS). Development Policy Review 36(5), 607–627. https://doi.org/10.1111/dpr.12318.

S., P., Roessali, W., R, T., Darwanto, D. and Hendarto, M., 2021. Analysis of agricultural sector productivity improvement strategies through cooperative institutions. International Journal of Ethics and Systems, 38(1), 20-34. https://doi.org/10.1108/ijoes-04-2020-0055.

Sarfo, Y., Mußhoff, O., Weber, R. and Danne, M., 2021. Farmers' willingness to pay for digital and conventional credit: insight from a discrete choice experiment in madagascar. Plos One, 16(11), e0257909. https://doi.org/10.1371/journal.pone.0257909.

Sari, R.R., Siahainenia, R.R. and Hadiwijoyo, S.S., 2020. Penguatan Kapasitas Kelembagaan dalam Pembangunan Kelurahan Berkelanjutan Berbasis Agrowisata di Kumpulrejo, Kota Salatiga. Jurnal Wilayah Dan Lingkungan 8(2), 187–201. https://doi.org/10.14710/jwl.8.2.187-201.

Sariati, I. and Hayanti, D., 2023. Transformasi Kelembagaan Petani Menjadi Kelembagaan Ekonomi Petani Sebagai Model Akselerasi Pengembangan Agribisnis. Jurnal Suluh Tani 1(2), 28-34.

Sasmi, M., Agustar, A., Syarfi, I. W. and Hasnah, H., 2023. Empowerment of farmer institutions in improving farmer's bargaining position. IOP Conference Series: Earth and Environmental Science, 1177(1), 012001. https://doi.org/10.1088/1755-1315/1177/1/012001.

Scolastica, N.N., Hillary, B. and Kenneth, W.S., 2023. Vertical market linkages between smallholder African indigenous vegetables farmers and other market actors in Bungoma County. Journal of Development and Agricultural Economics 15(1), 26–36. https://doi.org/10.5897/jdae2023.1380.

Sehat Tan, S. and Mailena, L., 2021. Empowerment of Farmers toward Corporate Implementation. E3S Web of Conferences, 232. https://doi.org/10.1051/e3sconf/202123201032.

Sertse, S.F., Khan, N.A., Shah, A.A., Liu, Y. and Naqvi, S.A.A., 2021. Farm households' perceptions and adaptation strategies to climate change risks and their determinants: Evidence from Raya Azebo district, Ethiopia. International Journal of Disaster Risk Reduction 60. https://doi.org/10.1016/j.ijdrr.2021.102255.

Sharma, J. and Yutaka Ohama., 2007. Participatory Local Social Development- An Emerging Discipline. Bharat Book Centre. Lucknow. India.

Shevlin, M., Adamson, G. and Collins, K., 2003. The Self-Perception Profile for Children (SPPC): A multiple-indicator multiple-wave analysis using LISREL. Personality and Individual Differences 35(8), 1993–2005. https://doi.org/10.1016/S0191-8869(03)00046-1.

Sinaga, R., Prastowo, Simangunsong, B.C.H., Liebman, A. and Tambunan, A.H., 2019. Analysis of barriers in supplying electricity using interpretative structural modeling. Energy Strategy Reviews 25, 11–17. https://doi.org/10.1016/j.esr.2019.04.011.

Sinaini, L. and Iwe, M., 2020. Agribusiness institutional development model of corn in Muna regency, Indonesia. IOP Conf. Series: Earth and Environmental Science 484 (2020) 012143. https://doi.org/10.1088/1755-1315/484/1/012143.

Singh, S. and Srivastava, S.K., 2021. Decision support framework for integrating triple bottom line (tbl) sustainability in agriculture supply chain. Sustainability Accounting, Management and Policy Journal, 13(2), 387-413. https://doi.org/10.1108/sampj-07-2021-0264.

Skobelev, P.O., Simonova, E.V., Smirnov, S.V., Budaev, D.S., Voshchuk, G.Y. and Morokov, A.L., 2019. Development of a knowledge base in the “smart farming” system for agricultural enterprise management. Procedia Computer Science 150, 154–161. https://doi.org/10.1016/j.procs.2019.02.029.

Somanje, A.N., Mohan, G. and Saito, O., 2021. Evaluating farmers’ perception toward the effectiveness of agricultural extension services in Ghana and Zambia. Agriculture and Food Security 10(1), 53. https://doi.org/10.1186/s40066-021-00325-6.

Sondakh, J.O., Paat, P.C., Rawung, J.B.M., Lintang, M., Layuk, P. and Rembang, J. H., 2023. Analysis of corn commodity production and development policy in north minahasa, north sulawesi province. IOP Conference Series: Earth and Environmental Science, 1253(1), 012078. https://doi.org/10.1088/1755-1315/1253/1/012078.

Stevens, J., Nyathi, P. and Salomons, M. 2021. Sustainability of conservation agriculture adoption and the role lead farmers play in zimbabwe. South African Journal of Agricultural Extension (Sajae), 49(2), 1-14. https://doi.org/10.17159/2413-3221/2021/v49n2a12783.

Sudarko, Sumardjo, Fatchiya, A. and Tjitropranoto, P., 2020. Factors A ffecting Farmer ’Autonomy and Sustainability of Smallholder Coffee Farming u sing SEM Lisrel. International Journal of Innovative Technology and Exploring Engineering 9(5), 1839–1845. https://doi.org/10.35940/ijitee.E2985.039520.

Sulaiman, A.I., Prastyanti, S., Adi, T.N., Chusmeru, Novianti, W., Windiasih, R. et al., 2023. Stakeholder Communication and Its Impact on Participatory Development Planning in Rural Areas. International Journal of Sustainable Development and Planning 18(8), 2513–2521. https://doi.org/10.18280/IJSDP.180822.

Sulistiyawati, R., Kusrini, N. and Imelda., 2021. Influence of Farmers Characteristic and Managerial Capacities on Rice Farmers Welfare. Economics Development Analysis Journal 4, 403-412.

Sumane, S., Kunda, I., Knickel, K., Strauss, A., Tisenkopfs, T., Rios, I. et al., 2018. Local and farmers’ knowledge matters! How integrating informal and formal knowledge enhances sustainable and resilient agriculture. Journal of Rural Studies 59, 232–241. https://doi.org/10.1016/j.jrurstud.2017.01.020.

Suradisastra, K., 2016. The Role of Institutions in Promoting Sustainable Agricultural Development in Indonesia. International Journal of Social Science and Humanity, 6(10), 761-765. https://doi.org/10.18178/ijssh.2016.V6.738.

Suryana, A. and Agustian, A., 2014. Analisis Dayasaing Usahatani Jagung di Indonesia. Analisis Kebijakan Pertanian 12 (2), 143-156.

Syafruddin, S., Wahyuni, A., Risna, R. and Rahayu, H., 2023. Introduction of new superior varieties and jajar legowo super cultivation technology to increase rice productivity in central sulawesi. Iop Conference Series Earth and Environmental Science, 1172(1), 012009. https://doi.org/10.1088/1755-1315/1172/1/012009.

Syarif, A. dan Mudatsir, R., 2023. Institutional Sustainability Strategy of Farmers in Red Onion Farming. Anjaro: International Journal of Agriculture and Business 4(1), 39-49. https://doi.org/10.31605.anjoro.v4i1.2415.

Takam-Fongang, G.M., Kamdem, C. B. and Kane, G.Q., 2019. Adoption and impact of improved maize varieties on maize yields: Evidence from central Cameroon. Review of Development Economics 23(1), 172–188. https://doi.org/10.1111/rode.12561.

Tan, S.S., Purnamayan, R., W.E, A.P., Handoko, S., Oktivian, C.I.H. and Yusron, M., 2021. Institutional strengthening of farmer groups on sustainable intercropping in Majalengka Regency, West Java Province. E3S Web of Conferences, 306. https://doi.org/10.1051/e3sconf/202130602038.

Tayang, W., Devi, M., Devi, H. and Mawblei, C. 2024. Quantitative insights into extension advisory services: enhancing rural livelihoods through evidence-based analysis. Journal of Experimental Agriculture International, 46(11), 587-597. https://doi.org/10.9734/jeai/2024/v46i113080

Taylor, B.M. and Grieken, M.V., 2015. Local institutions and farmer participation in agri-environmental schemes. Journal of Rural Studies 37, 10–19. https://doi.org/10.1016/j.jrurstud.2014.11.011.

TD, M. and ME, Z., 2022. Reasons for the collapse of irrigation schemes in South Africa: A case of Saringwa irrigation scheme in Mpumalanga province, South Africa. International Journal of Agriculture Extension and Social Development 5(1), 41–47. https://doi.org/10.33545/26180723.2022.v5.i1a.122.

Tham-Agyekum, E.K., Ankuyi, F., Asiedu, P., Juantoa, B., Abourden, G.A., Bakang, J.-E.A. et al., 2024. Cocoa Farmers' Participation in Public and Private Agricultural Extension Delivery in Amenfi Central District, Ghana. International Journal Of Humanities Education And Social Sciences (IJHESS) 3(4), 1681–1699.

Thi, H.P.L., Biesbroek, G.R. and Wals, A.E.J., 2017. The interplay between social learning and adaptive capacity in climate change adaptation: A systematic review. NJAS - Wageningen Journal of Life Sciences 82, 1–9. https://doi.org/10.1016/j.njas.2017.05.001.

Thornton, P. and Lipper, L., 2014. How Does Climate Change Alter Agricultural Strategies to Support Food Security?. IFPRI Discussion Paper 01340, https://dx.doi.org/10.2139/ssrn.2423763.

Tolno, E., Kobayashi, H., Ichizen, M., Esham, M. and Balde, B.S., 2015. Economic Analysis of the Role of Farmer Organizations in Enhancing Smallholder Potato

Farmers' Income in Middle Guinea. Journal of Agricultural Science 7(3), 123-137. https://doi.org/10.5539/jas.v7n3p123.

Triguna, R., Suharno, S. dan Adhi, A.K., 2022. Faktor-Faktor yang Memengaruhi Partisipasi Petani Pada Program Upaya Khusus Jagung di Kabupaten Pandeglang. Jurnal Agribisnis Indonesia 10(1), 142–151. https://doi.org/10.29244/jai.2022.10.1.142-151.

Tshikororo, M., Chauke, P.K. and Zuwarimwe, J., 2020. Institutional Factors Affecting Farmers' Decision to Adapt to Climate Change. Journal of Agricultural Science, 12(10), 50-56. https://doi.org/10.5539/jas.v12n10p50.

Tshikororo, M., Thaba, K., Nefale, T.A. and Tshikororo, M., 2021. Perception Driven From Farmers' Socio-economic Characteristics Towards Tackling Climate Change. Journal of Agricultural Science 13(6), 41-47. https://doi.org/10.5539/jas.v13n6p41.

Tuna, E., A. Martinovska Stojcheska, I. Janeska Stamenkovska and A. Simonovska., 2019. Networks in the macedonian organic production context. Journal of Agricultural, Food and Environmental Sciences 73:47- 56.

Uphoff, N., 1986. Local Institutional Development : An Analytical Sourcebook With Cases, Kumarian Press, America.

Uphoff, N., 1992. Local Institutions And Participation For Sustainable Development A Farmer-Centered Approach to Sustainable Development: Building Equity through Rural Co-operatives with the System of Rice Intensification View project Understanding Contributions of Beneficial Microorganisms to the Performance of Rice and Other Crops under SRI/SCI Management; Synthesis of Knowledge and Experience with System of Crop Intensification View project. https://www.researchgate.net/publication/242463814.

Uphoff, N., 1996. Understanding the World as a Heterogeneous Whole: Insights into Systems from Work on Irrigation. Systems Research 13 (1), 3-12.

Vaidya, B., Rana, H. and Sharma, S.R., 2023. Adoption of Digital Agro-Advisory Services Among Smallholder Farmers: Patterns of the Innovation-Decision Process. An Interdisciplinary Journal Vol.9 No.1 : 313-345.

Vanger, E.T. and Nwosu, B.U., 2020. Institutional parameters that condition farmer–herder conflicts in Tivland of Benue State, Nigeria. African Security Review 29(1), 20–40. https://doi.org/10.1080/10246029.2020.1763413.

Verhofstadt, E. and Maertens, M., 2014. Smallholder cooperatives and agricultural performance in Rwanda: Do organizational differences matter?. Agricultural Economics 45(S1), 39–52. https://doi.org/10.1111/agec.12128.

Wang, J., Zhao, K., Cui, Y. and Cao, H., 2022. Formal and Informal Institutions in Farmers' Withdrawal from Rural Homesteads in China: Heterogeneity Analysis Based on the Village Location. Land 11(10), 1844. https://doi.org/10.3390/land11101844.

Networks in the macedonian organic production context. Journal of Agricultural, Food and Environmental Sciences 73:47- 56.

Wang, M., He, B., Zhang, J. and Jin, Y., 2021. Analysis of the effect of cooperatives on increasing farmers' income from the perspective of industry prosperity based on the psm empirical study in shennongjia region. Sustainability, 13(23), 13172. https://doi.org/10.3390/su132313172.

Wang, J., Zhao, K., Cui, Y. and Cao, H., 2022. Formal and Informal Institutions in Farmers' Withdrawal from Rural Homesteads in China: Heterogeneity Analysis Based on the Village Location. Land 11(10), 1844. https://doi.org/10.3390/land11101844.

Wang, W., Wang, J., Liu, K. and Wu, Y. 2020. Overcoming barriers to agriculture green technology diffusion through stakeholders in china: a social network analysis. International Journal of Environmental Research and Public Health, 17(19), 6976. https://doi.org/10.3390/ijerph17196976.

Wankhade, S., Sahni, M., Mellado-Cid, C. and Leon-Castro, E., 2023. Using the Ordered Weighted Average Operator to Gauge Variation in Agriculture Commodities in India. Axioms 12(10), 985. https://doi.org/10.3390/axioms12100985.

Wedajo, D.Y., Belissa, T.K. and Jilito, M.F., 2019. Harnessing indigenous social institutions for technology adoption: 'Afoosha' society of Ethiopia. Development Studies Research 6(1), 152–162. https://doi.org/10.1080/21665095.2019.1678187.

Wang, M., He, B., Zhang, J. and Jin, Y., 2021. Analysis of the effect of cooperatives on increasing farmers' income from the perspective of industry prosperity based on the psm empirical study in shennongjia region. Sustainability, 13(23), 13172. https://doi.org/10.3390/su132313172.

Wang, J., Zhao, K., Cui, Y. and Cao, H., 2022. Formal and Informal Institutions in Farmers' Withdrawal from Rural Homesteads in China: Heterogeneity Analysis Based on the Village Location. Land 11(10), 1844. https://doi.org/10.3390/land11101844.

Wheeler, R. and Lobley, M., 2021. Managing extreme weather and climate change in UK agriculture: Impacts, attitudes and action among farmers and stakeholders. Climate Risk Managemen 32, 100313. https://doi.org/10.1016/j.crm.2021.100313.

Wibowo, A., Santoso, A., B. and Dewi, R., A., 2022. Enhancing Stakeholder Engagement in Sustainable Agricultural Practices: A Case Study from Indonesia. Journal of Agricultural Sciences, 9(3), 150-160. https://doi.org/10.5539/jas.v9n3p150. Yobe, C., Ferrer, S. and Mudhara, M., 2024. Determinants of market choice among agricultural cooperatives in south africa. Journal of Agribusiness and Rural Development, 71(1), 103-123. https://doi.org/10.17306/j.jard.2024.01810

Wicaksono, K.P., Kusuma, B.A., Permanasari, P.N., Aprilia, D., Dewi, R.W.K., Ramadhani, M., 2024. The Willingness of Farmer to Adopt Innovations from Farmer-Owned Enterprises (BUMP). Journal of Agri-Sociopreneur and Rural Development 35(1), 31-39. https://doi.org/10.21776/ub.habitat.2024.035.1.4.

Widayanto, Y., 2013. Model Perumusan Kebijakan Pendukung Pengembangan Industri Kakao Berbasis Kinerja Driver Rantai Pasok.

Wisting, L., Wonderlich, J., Skrivarhaug, T., Dahl-Jørgensen, K. and Rø, Ø., 2019. Psychometric properties and factor structure of the diabetes eating problem survey - revised (DEPS-R) among adult males and females with type 1 diabetes. Journal of Eating Disorders 7(2). https://doi.org/10.1186/s40337-018-0232-0.

Witinok-Huber, R. and Radil, S. M., 2021. Introducing the Local Agricultural Potential Index: An approach to understand local agricultural extension impact for farmer adaptive capacity and gender equity. World Development Perspectives 23, 100345. https://doi.org/10.1016/j.wdp.2021.100345.

Wossen, T., Abdoulaye, T., Alene, A., Haile, M.G., Feleke, S., Olanrewaju, A. et al., 2017. Impacts of extension access and cooperative membership on technology adoption and household welfare. Journal of Rural Studies 54, 223–233. https://doi.org/10.1016/j.jrurstud.2017.06.022.

Wu, W., Li, L., Chen, H., Xu, M. and Yuan, Y., 2022. Farmers' Preference for Participating in Rural Solid Waste Management: A Case Study from Shaanxi Province, China. International Journal of Environmental Research and Public Health 19(21), 14440. https://doi.org/10.3390/ijerph192114440.

Wu, S. and Li, S., 2024. Collaboration to address the challenges faced by smallholders in practicing organic agriculture: a case study of the organic sorghum industry in zunyi city, china. Agriculture, 14(5), 726. https://doi.org/10.3390/agriculture14050726.

Xu, K. and Xia, X., 2023. The Influence of Farmers' Clan Networks on Their Participation in Living Environment Improvement during the Time of Transition in Traditional Rural China. Agriculture 13(5), 1055. https://doi.org/10.3390/agriculture13051055.

Xu, M. and Zhang, Z., 2021. Farmers' knowledge, attitude, and practice of rural industrial land changes and their influencing factors: Evidences from the Beijing-Tianjin-Hebei region, China. Journal of Rural Studies 86, 440–451. https://doi.org/10.1016/j.jrurstud.2021.07.005.

Yang, W. and Wang, L., 2022. Impact of farmer group participation on the adoption of sustainable farming practices—spatial analysis of new zealand dairy farmers. Annals of Public and Cooperative Economics, 94(3), 701-717. https://doi.org/10.1111/apce.12404.

Yanore, L., Sok, J. and Lansink, A.O., 2024. Farmers' perceptions of obstacles to business development. EuroChoices, 23(1), 56-62. https://doi.org/10.1111/1746-692x.12420.

Yi, Z., Wang, Y. and Chen, Y.J., 2021. Financing an Agricultural Supply Chain with a Capital-Constrained Smallholder Farmer in Developing Economies. Production and Operations Management 30(7), 2102–2121. https://doi.org/10.1111/poms.13357.

Yu, S. and Fleming, L., 2022. Regional crowdfunding and high tech entrepreneurship. Research Policy 51(9), 104348. https://doi.org/10.1016/j.respol.2021.104348.

Yobe, C., Ferrer, S. and Mudhara, M., 2024. Determinants of market choice among agricultural cooperatives in south africa. Journal of Agribusiness and Rural Development, 71(1), 103-123. https://doi.org/10.17306/j.jard.2024.01810.

Yulian, M., Sirojuzilam, Lubis, S. and Purwoko, A., 2024. Accelerating Urban Development in Indonesia: The Impact of Online Government Services. International Journal of Sustainable Development and Planning 19(3), 1041–1052. https://doi.org/10.18280/ijsdp.190322.

Zhang, C., Nie, K. and Zhu, Y., 2024. Participation in land rental and labor markets and agricultural economic performance of banana farmers in China. Land Use Policy 146, 107307. https://doi.org/10.1016/j.landusepol.2024.107307.

Zhang, H. and Wu, D., 2023. The impact of rural industrial integration on agricultural green productivity based on the contract choice perspective of farmers. Agriculture, 13(9), 1851. https://doi.org/10.3390/agriculture13091851.

Zhang, J. and Chen, Q., 2022. The impact of farmland tenure security on china's agricultural production efficiency: a perspective of agricultural production factors. Sustainability, 14(23), 16266. https://doi.org/10.3390/su142316266.

Zhang, C., Nie, K. and Zhu, Y., 2024. Participation in land rental and labor markets and agricultural economic performance of banana farmers in China. Land Use Policy 146, 107307. https://doi.org/10.1016/j.landusepol.2024.107307.

Zhang, J., Luo, J. and Li, J., 2021. Agricultural co-operatives participating in supply chain integration in China: A qualitative comparative analysis. PLoS ONE 16(4), e0250018. https://doi.org/10.1371/journal.pone.0250018.

Zhang, J., Mishra, A.K. and Ma, X., 2023. Mechanism of Chinese farmers' land rental participation: The role of invisible markets and public intervention. Food Policy 117, 102453. https://doi.org/10.1016/j.foodpol.2023.102453.

Zhao, D. and Hong, Z., 2021. Livelihoods, technological constraints, and low-carbon agricultural technology preferences of farmers: analytical frameworks of technology adoption and farmer livelihoods. International Journal of Environmental Research and Public Health, 18(24), 13364. https://doi.org/10.3390/ijerph182413364.

Zondi, N.T.B., Ngidi, M.S.C., Ojo, T.O. and Hlatshwayo, S.I., 2022. Factors Influencing the Extent of the Commercialization of Indigenous Crops Among Smallholder Farmers in the Limpopo and Mpumalanga Provinces of South Africa. Frontiers in Sustainable Food Systems 5, 777790. https://doi.org/10.3389/fsufs.2021.77.