

Supplementary Materials

Plastic Mulch as a Sustainable Yield-Boosting Strategy for Fresh Corn Production in the Andean Region of Ecuador

Ana Pincay-Verdezoto ¹, José Luis Zambrano-Mendoza ^{2,*}, Cristian Subía-García ², Carlos Sangoquiza-Caiza ², Robinson Guanotoa-Chasipanta ², Rafael Muñoz-Tenelema ³, César Asaquibay-Inca ⁴, María Nieto-Beltrán ⁴, Victoria López-Guerrero ⁴, José Camacho-Viteri ⁴, Jovanny Suquillo-Simbaña ⁴ and Chang Hwan Park ¹

¹ Korea Partnership for Innovation of Agriculture (KOPIA), Cutuglagua 171108, Ecuador

² Maize Program, Estación Experimental Santa Catalina, Instituto Nacional de Investigaciones Agropecuarias (INIAP), Cutuglagua 171108, Ecuador

³ Maize Program, Estación Experimental del Austro, INIAP, Gualaceo 010350, Ecuador

⁴ Validation and Technology Transfer Unit, Estación Experimental Santa Catalina, INIAP, Cutuglagua 171108, Ecuador

* Correspondence: jose.zambrano@iniap.gob.ec

How To Cite: Pincay-Verdezoto, A.; Zambrano-Mendoza, J.L.; Subía-García, C.; et al. Plastic Mulch as a Sustainable Yield-Boosting Strategy for Fresh Corn Production in the Andean Region of Ecuador. *Physiology and Management of Sustainable Crops* **2025**, *1*(1), 4.

Table S1. Climatic conditions for maize cultivation trials using plastic mulch in the Ecuadorian Highlands during the years 2022, 2023, and 2024.

Province (Location)	Average Temperature (°C)			Precipitation (mm·Year ⁻¹)		
	2022 *	2023 **	2024 **	2022 *	2023 **	2024 **
Loja (Urdaneta, Sauce)	15.85	16.58	16.74	1791.8	1416.9	1300.6
Cañar (Gualaceo, Cojitambo, Charcay)	10.33	10.69	11.00	1423.2	1192.9	1169.3
Azuay (Gualaceo)	14.77	15.05	15.46	2050.1	1921.5	1661.9
Chimborazo (San Andrés, Valparaíso, Guaslan)	13.22	13.71	14.05	933.2	1008.1	703.6
Tungurahua (Huambaló, Leito, El Mirador)	12.43	12.97	13.43	890	850.4	668.6
Pichincha (Cutuglagua)	12.03	12.63	12.88	1763	1550	1467.4
Imbabura (Punkuwayco, Chiriwasi, San Antonio)	12.26	13.23	13.56	1571	2474.5	2135.9
Carchi (Canchaguano, San Isidro, El Rosario)	11.96	12.39	12.68	1539.8	1248	1320.6

* Source: MAG: <https://sipa.agricultura.gob.ec/index.php/boletin-nacional-precipitacion-temperatura/2022-temperatura-precipitacion> (accessed on 20 January 2025). ** Source: <https://meteostat.net/es/place/ec/otavalo?s=84036&t=2025-05-19/2025-05-26> (accessed on 20 January 2025).

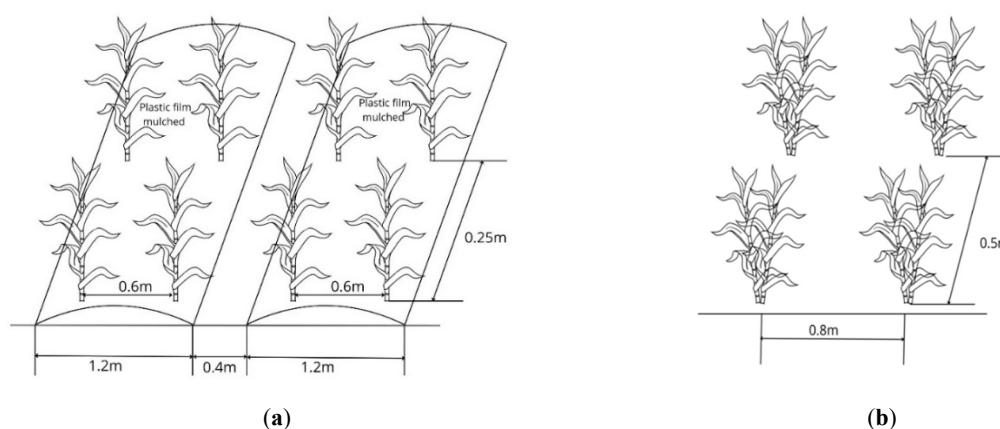


Figure S1. Schematic diagram illustrating the field layout: (a) plastic mulching; and (b) conventional farmer-managed control.



Copyright: © 2025 by the authors. This is an open access article under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

Publisher's Note: Scilight stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.