SI Table 1:Agroecosystem indicators and component results showing mean values (x̅), sample size (n) and percent differences between organic (Org) and conventional (Con) farming systems. Significant differences (*P*-value < 0.05) determined by t-test are indicated in bold.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Org x̅** | **Con x̅** | **Org n** | **Con n** | **diff %** | **p-value** |
| Farming System | 6.80 | 5.90 | 18 | 22 | 15.2 | **<0.001** |
| 1. Socially Self-Organized | 7.13 | 6.99 | 18 | 22 | 2.0 | 0.670 |
| 1.1 Group Membership | 8.33 | 7.95 | 18 | 22 | 4.8 | 0.425 |
| 1.2 Functions of groups | 7.83 | 8.98 | 18 | 22 | -12.7 | **<0.001** |
| 1.3 Access to local farmers markets | 3.56 | 3.82 | 18 | 22 | -6.9 | 0.764 |
| 1.4 Previous collective action | 9.14 | 8.39 | 18 | 22 | 9.0 | 0.231 |
| 1.5 Access to communal resources | 6.78 | 5.82 | 18 | 22 | 16.5 | 0.199 |
| 2. Ecologically Self-Regulated | 7.88 | 6.02 | 18 | 22 | 31.0 | **<0.001** |
| 2.1 Perennial crops | 10.00 | 9.09 | 17 | 22 | 10.0 | 0.212 |
| 2.2 Reliance on local species | 9.78 | 7.95 | 18 | 22 | 22.9 | **0.009** |
| 2.3 Synthetic pesticide use/disposal | 10.00 | 5.34 | 18 | 22 | 87.2 | **<0.001** |
| 2.4 Use of nitrogen fixing plants | 8.61 | 6.14 | 18 | 22 | 40.3 | 0.075 |
| 2.5 Buffer zones | 1.44 | 0.68 | 18 | 22 | 111.9 | 0.299 |
| 2.6 Fertilizer use | 9.72 | 5.36 | 18 | 21 | 81.5 | **<0.001** |
| 2.7 Agroforestry | 7.85 | 7.33 | 18 | 22 | 7.1 | 0.419 |
| 2.8 Energy sources | 5.89 | 6.23 | 18 | 22 | -5.4 | 0.776 |
| 3. Appropriately Connected | 5.35 | 4.99 | 18 | 22 | 7.3 | 0.426 |
| 3.1 Seed/Breed sources | 7.50 | 6.68 | 18 | 22 | 12.2 | 0.341 |
| 3.2 Intercropping (practiced) | 5.28 | 3.18 | 18 | 22 | 65.9 | **0.007** |
| 3.3 Access to information | 6.85 | 7.13 | 18 | 22 | -3.8 | 0.380 |
| 3.4 (Para) Veterinary access | 3.53 | 4.47 | 17 | 19 | -21.1 | 0.517 |
| 3.5 Trust and cooperation | 3.44 | 3.42 | 18 | 22 | 0.6 | 0.960 |
| 4. Functional and response diversity | 7.45 | 6.06 | 18 | 22 | 22.9 | **0.015** |
| 4.1 Species diversity | 4.48 | 3.45 | 18 | 22 | 29.6 | **0.034** |
| 4.2 Agriculture categories | 8.78 | 6.18 | 18 | 22 | 42.0 | **0.021** |
| 4.3 Income sources | 8.33 | 8.64 | 18 | 22 | -3.5 | 0.758 |
| 4.4 Pest/animal disease control | 8.22 | 5.98 | 18 | 22 | 37.6 | **0.016** |
| 5. Optimally redundant | 4.98 | 4.95 | 18 | 22 | 0.6 | 0.897 |
| 5.1 Varietal diversity | 1.39 | 1.60 | 18 | 22 | -13.1 | 0.604 |
| 5.2 Market access  | 2.33 | 2.50 | 18 | 20 | -6.7 | 0.839 |
| 5.3 Water sources | 5.78 | 4.36 | 18 | 22 | 32.4 | 0.058 |
| 5.4 Energy sources | 10.00 | 9.64 | 18 | 22 | 3.8 | 0.199 |
| 5.5 Land management practices | 9.22 | 8.14 | 18 | 22 | 13.3 | 0.295 |
| 5.6 Sources of fertilizers | 1.11 | 4.25 | 18 | 20 | -73.9 | **0.003** |
| 5.7 Major productive assets owned/accessible | 7.25 | 7.27 | 18 | 22 | -0.3 | 0.926 |
| 5.8 Seed/Livestock access | 6.81 | 5.34 | 18 | 22 | 27.4 | 0.164 |
| 5.9 Human nutrition | 7.43 | 6.76 | 18 | 22 | 9.9 | 0.148 |
| 5.10 Animal nutrition | 3.42 | 4.21 | 18 | 19 | -18.7 | 0.369 |
| 5.11 Cereal bank | 0.00 | 0.00 | 18 | 22 | 0.0 | NS |
| 6. Spatial and temporal heterogeneity | 7.12 | 5.81 | 18 | 22 | 22.7 | **0.006** |
| 6.1 Temporal heterogeneity of farm | 7.12 | 4.73 | 17 | 22 | 50.6 | **0.033** |
| 6.2 Trees on farm | 5.11 | 3.82 | 18 | 22 | 33.9 | 0.207 |
| 6.3 Types of soil | 5.00 | 3.86 | 18 | 22 | 29.4 | 0.329 |
| 6.4 Land management practices | 9.76 | 8.14 | 17 | 22 | 20.0 | 0.087 |
| 6.5 Heterogeneity of farm/landscape | 9.83 | 9.45 | 18 | 22 | 4.0 | 0.240 |
| 6.6 Intercropping (% of farm) | 4.28 | 1.01 | 18 | 22 | 323.9 | **<0.001** |
| 6.7 Invasive species | 6.89 | 6.36 | 18 | 22 | 8.3 | 0.616 |
| 6.8 Perennials | 9.44 | 9.09 | 18 | 22 | 3.9 | 0.682 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 7. Exposed to disturbance | 5.18 | 5.01 | 18 | 22 | 3.5 | 0.638 |
| 7.1 Invasive species | 2.89 | 3.91 | 18 | 22 | -26.1 | 0.432 |
| 7.2 Disturbances | 3.81 | 4.49 | 18 | 22 | -15.3 | 0.255 |
| 7.3 Breeding for resistance | 8.24 | 8.42 | 17 | 19 | -2.2 | 0.885 |
| 7.4 Buffer zones | 1.44 | 0.68 | 18 | 22 | 111.9 | 0.299 |
| 7.5 Reliance on local species | 9.78 | 7.95 | 18 | 22 | 22.9 | **0.009** |
| 8. Coupled with local natural capital | 7.61 | 5.95 | 18 | 22 | 27.8 | **<0.001** |
| 8.1 Land quality | 5.28 | 3.41 | 18 | 22 | 54.8 | **0.025** |
| 8.2 Health of soil/water quality | 4.22 | 5.89 | 18 | 22 | -28.3 | **0.027** |
| 8.3 Land improving practices | 9.28 | 6.27 | 18 | 22 | 47.9 | **<0.001** |
| 8.4 Energy conservation | 5.58 | 7.07 | 18 | 22 | -21.0 | 0.111 |
| 8.5 Practices for resource recycling | 8.17 | 5.73 | 18 | 22 | 42.6 | **0.031** |
| 8.6 Pesticides use | 10.00 | 5.34 | 18 | 22 | 87.2 | **<0.001** |
| 8.7 Planted trees | 10.00 | 9.09 | 18 | 22 | 10.0 | 0.199 |
| 8.8 Animal disease control practices  | 8.29 | 4.68 | 17 | 19 | 77.1 | **0.004** |
| 9. Reflective and shared learning | 7.42 | 6.96 | 18 | 22 | 6.6 | 0.208 |
| 9.1 Participation in FFS and other groups | 8.83 | 8.91 | 18 | 22 | -0.9 | 0.722 |
| 9.2 Trends/changes in climate | 8.61 | 7.95 | 18 | 22 | 8.3 | 0.399 |
| 9.3 Extension services | 2.22 | 3.43 | 18 | 21 | -35.2 | 0.094 |
| 9.4 Record keeping | 8.33 | 5.91 | 18 | 22 | 41.0 | **0.018** |
| 9.5 Sources of knowledge for environment/agriculture | 9.11 | 8.45 | 18 | 22 | 7.8 | 0.439 |
| 10. Globally autonomous & locally interdependent | 6.74 | 6.17 | 18 | 22 | 9.2 | 0.156 |
| 10.1 Direct selling/trading to consumers | 0.00 | 1.43 | 12 | 14 | -100.0 | 0.187 |
| 10.2 Direct buying/trading with producers | 2.78 | 5.00 | 18 | 22 | -44.4 | 0.161 |
| 10.3 Local farm inputs | 8.28 | 7.64 | 18 | 22 | 8.4 | 0.311 |
| 10.4 Previous collective action | 8.61 | 9.05 | 18 | 22 | -4.8 | 0.562 |
| 10.5 Ability to breed animals at local level | 5.88 | 8.42 | 17 | 19 | -30.1 | 0.094 |
| 10.6 Reliance on local species | 7.50 | 4.17 | 18 | 21 | 80.0 | **0.005** |
| 10.7 Access to local market | 4.44 | 3.82 | 18 | 22 | 16.4 | 0.487 |
| 10.8 Reliance on local energy sources | 10.00 | 9.36 | 18 | 22 | 6.8 | 0.199 |
| 10.9 Animal disease control | 7.29 | 6.32 | 17 | 19 | 15.5 | 0.492 |
| 10.10 Chemical pesticide and fertilizer use | 10.00 | 4.32 | 18 | 22 | 131.6 | **<0.001** |
| 11. Honours Legacy | 9.53 | 8.07 | 18 | 22 | 18.1 | **0.005** |
| 11.1 Elder participation | 9.44 | 8.64 | 18 | 22 | 9.4 | 0.410 |
| 11.2 Agricultural learning | 9.11 | 8.45 | 18 | 22 | 7.8 | 0.439 |
| 11.3 Traditional activities | 10.00 | 8.09 | 18 | 22 | 23.6 | **0.026** |
| 11.4 Preservation of traditional knowledge | 9.44 | 5.91 | 18 | 22 | 59.8 | **0.009** |
| 11. 5 Tree products | 9.67 | 9.27 | 18 | 22 | 4.2 | 0.494 |
| 12. Builds human capital | 8.62 | 6.81 | 18 | 22 | 26.6 | **<0.001** |
| 12.1 Household health | 7.22 | 7.95 | 18 | 22 | -9.1 | 0.142 |
| 12.2 Knowledge of practices to improve the land | 7.33 | 4.84 | 18 | 22 | 51.5 | **<0.001** |
| 12.3 Infrastructure | 9.44 | 10.00 | 18 | 22 | -5.6 | 0.274 |
| 12.4 Group participation | 8.00 | 7.86 | 18 | 22 | 1.7 | 0.736 |
| 12.5 Household equality  | 8.62 | 8.22 | 18 | 22 | 4.9 | 0.404 |
| 12.6 Investment in human capital | 6.11 | 2.00 | 18 | 22 | 205.6 | **0.001** |
| 13. Reasonably Profitable | 3.32 | 3.41 | 18 | 22 | -2.6 | 0.841 |
| 13.1 Financial support | 2.78 | 2.73 | 18 | 22 | 1.9 | 0.973 |
| 13.2 Non-farm income generating activities  | 6.39 | 6.73 | 18 | 22 | -5.0 | 0.801 |
| 13.3 Market prices/costs | 3.57 | 2.77 | 18 | 22 | 28.8 | 0.262 |
| 13.4 Insurance | 0.00 | 0.91 | 18 | 22 | -100.0 | 0.199 |
| 13.5 Savings | 3.89 | 3.94 | 18 | 22 | -1.3 | 0.917 |

*\* Variations in sample size are due to some farmers refraining from answering the respective survey question, often due to the question not being applicable to the farmer or his/her farming system.*