

## List of Abbreviations

|       |  |      |  |
|-------|--|------|--|
| 4Rs   | right product, rate, time and method of application of fertilizers     | GIS  | Geographic Information System                        |
| ac    | acre   | ha   | hectare  |
| AE    | agronomic efficiency   | HP   | high potential                                       |
| AEZ   | agro-ecological zone   | ISFM | Integrated Soil Fertility Management                 |
| AfSIS | Africa Soil Information Service  | K    | potassium  |
| AGRA  | Alliance for a Green revolution in Africa                              | KCl  | potassium chloride                                   |
| ai    | Aridity Index  | kg   | kilogram   |
| B     | Boron  | KSh  | Kenya Shilling                                       |
| BNF   | biological nitrogen fixation   | LP   | Linear programming                                   |
| CA    | conservation agriculture   | LP   | low potential  |
| Ca    | calcium  | masl | metres above sea-level                               |
| C     | carbon   | meq  | milliequivalent                                      |
| CAIMA | Centrale d'Approvisionnement en Intrants et Matériels Agricoles, Niger | Mg   | magnesium  |
| CAN   | calcium ammonium nitrate   | MKW  | Malawi kwacha  |
| CEC   | cation exchange capacity   | Mn   | manganese  |
| cm    | centimetre   | Mo   | molybdenum   |
| Cu    | copper   | MOP  | muriate of potash (KCl)                              |
| DAP   | diammonium phosphate   | mt   | metric ton   |
| DE    | Distance from Equator  | MZM  | Mozambique metical                                   |
| DEM   | digital elevation model  | N    | nitrogen   |
| EOR   | economically optimal rate  | Na   | sodium   |
| FAO   | Food and Agriculture Organization of the United Nations                | NGO  | non-governmental organisation                        |
| FBO   | farmer-based organization  | NPK  | nitrogen, phosphorus, potassium                      |
| FCFA  | CFA franc  | OFRA | Optimising Fertilizer Recommendations In Africa      |
| Fe    | iron   | OFT  | on-farm trials                                       |
| FGN   | Federal Government of Nigeria  | OM   | organic matter                                       |
| FMSP  | Federal Market Stabilization Program, Nigeria                          | P    | phosphorous  |
| FOT   | Fertilizer optimization tool   | PET  | potential evapotranspiration                         |
| FYM   | farmyard manure  | ppm  | parts per million                                    |
| GAP   | good agricultural practices  | REC  | current recommended rate (of fertilizer application) |
| GDP   | gross domestic product   | RMT  | research-managed trials                              |
| GH¢   | Ghana cedi   | RP   | rock phosphate                                       |
|       |  | RwF  | Rwanda franc   |
|       |  | S    | sulphur  |

|      |  |      |                           |
|------|--|------|---------------------------|
| SARI | Savanna Agricultural Research Institute, Ghana | TSP  | triple superphosphate     |
| SOC  | soil organic carbon                            | UgSh | Uganda Shilling           |
| SSA  | Sub-Saharan Africa                             | WAP  | weeks after planting      |
| SSP  | single superphosphate                          | WAT  | weeks after transplanting |
| t    | ton  | yr   | year                      |
| TA   | Tropical Alpine                                | ZMK  | Zambia kwacha             |
| ts   | Temperature Seasonality                        | Zn   | zinc                      |

## List of Crops and Other Plants with Scientific Names

|               |                                |              |   |
|---------------|--------------------------------|--------------|---|
| Azolla        | <i>Azolla spp.</i>             | Oil palm     | <i>Elaeis guineensis</i>                |
| Banana        | <i>Musa acuminata (AAA-EA)</i> | Pearl millet | <i>Pennisetum glaucum</i>               |
| Barley        | <i>Hordeum vulgare</i>         | Pigeonpea    | <i>Cajanus cajan</i>                    |
| Cabbage, kale | <i>Brassica oleracea</i>       | Pineapple    | <i>Ananas comosus</i>                   |
| Cashew nut    | <i>Anacardium occidentale</i>  | Plantain     | <i>Musa × paradisiaca</i>               |
| Cassava       | <i>Manihot esculenta</i>       | Pyrethrum    | <i>Chrysanthemum spp</i>                |
| Cocoa         | <i>Theobroma cacao</i>         | Rice         | <i>Orizae sativa, Orizae glaberrima</i> |
| Cocoyam       | <i>Xanthosoma spp</i>          | Rubber       | <i>Hevea brasiliensis</i>               |
| Coffee        | <i>Coffea spp</i>              | Sesame       | <i>Sesamum indicum</i>                  |
| Common bean   | <i>Phaseolus vulgaris</i>      | Sisal        | <i>Agave sisalana</i>                   |
| Cotton        | <i>Gossypium spp</i>           | Sorghum      | <i>Sorghum bicolor</i>                  |
| Cowpea        | <i>Vigna unguiculata</i>       | Soybean      | <i>Glycine max</i>                      |
| Faba bean     | <i>Vicia faba</i>              | Striga       | <i>Striga spp</i>                       |
| Finger millet | <i>Eleusine coracana</i>       | Sunflower    | <i>Helianthus annuus</i>                |
| Green gram    | <i>Vigna radiata</i>           | Sweet potato | <i>Ipomoea batatas</i>                  |
| Groundnut     | <i>Arachis hypogaea</i>        | Taro         | <i>Colocasia esculenta</i>              |
| Irish potato  | <i>Solanum tuberosum</i>       | Tea          | <i>Camellia sinensis</i>                |
| Kale, cabbage | <i>Brassica oleracea</i>       | Teff         | <i>Eragrostis tef</i>                   |
| Kikuyu grass  | <i>Pennisetum clandestinum</i> | Tiger nut    | <i>Cyperus esculentus</i>               |
| Lablab        | <i>Lablab purpureus</i>        | Tobacco      | <i>Nicotiana tabacum</i>                |
| Maize         | <i>Zea mays</i>                | Wheat        | <i>Triticum aestivum</i>                |
| Mango         | <i>Mangifera indica</i>        | Yam          | <i>Dioscorea alata</i>                  |
| Mucuna        | <i>Mucuna pruriens</i>         |              |   |