Download Modeling Crop Production Systems Principles And Application

1. Introduction. Agricultural production systems undergo rapid changes in response to shifts in production expenses, consumer demands, and increasing concerns for food safety, security, and environmental impact (Hanson et al., 2008, Hendrickson et al., 2008).An overriding concern is the need to develop sustainable production systems that address societal concerns for environmental impacts and ...Highlights IPM involves biodiversity, plant resistance, landscape ecology, and hierarchies. These principles are considered within the Human-Pest-Environment-Crop framework. Different levels of hierarchies include decision-making (farmers to policy-makers). This framework is considered in a series of key rice diseases and insect pests. This generic framework stresses the need for basic ...This section introduces a range of climate-smart agriculture (CSA) practices and technologies within seven entry points for CSA; soil management, crop management, water management, livestock management, forestry, fisheries and aquaculture, and energy management.Practices are understood broadly as ways of doing things, for example, precision farming, tillage, and fertilization; these are all ...CRAFT: A New Spatial Yield Forecasting Tool. The CCAFS Regional Agricultural Forecasting Toolbox (CRAFT) is a software platform designed for yield forecasting at spatial resolutions of either 5 or 30 arc-minutes using an ensemble modeling approach. Currently the DSSAT, APSIM, and SARRA-H crop simulation models have been implemented for nine important food and feed crops using the AgMIP IT tools.