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MyFields Mobile Abstract

The MyFields Mobile app for Android and iOS is designed to provide a solution for farmers to manage their fields on the go. Most farmers currently use paper and pen to keep track of information related to their crops and fields; this app will provide a mobile interface for a farmer to bring that management into the digital age. The app includes functionality for creating a field, displaying and editing an existing field’s information, and providing a working list of fields for the user. It also provides functionality for synchronizing that user’s field information with a web server that will store that data securely in the cloud.

Beyond field management, the app also includes functionality for farmers to take pest samples from their fields. This provides an easy way for farmers to associate a particular pest with their field to keep track of it; beyond that, however, the app will also provide a determination of whether a field’s population of a particular pest is above acceptable levels. At the end of taking a sample, based on the data collected by the farmer, the app will output a determination to treat the field for that particular type of pest (usually by spraying insecticide). These samples are associated with a particular field and will therefore track not only the current pest levels of the field, but also the field’s history of pests.

This history may then be used by K-State extension agents to track the movement and growth of insect populations across a particular area. The overriding objective of MyFields Mobile is both to provide a digital interface for managing a farmer’s set of fields and insect levels, and to provide extension agents with an interface for collecting data from farmers about pest growth and the movement of invasive species. To that extent, all data collected by farmers will be synchronized with the web service mentioned previously, and which will then be available to both the farmers and extension agents.

The above web service, which is managed by K-State Extensions and titled MyFields, will store the farmer’s information securely on a remote server. Then, an extension agent may access a particular user’s data to track pest movements across their fields or to help a farmer manage their fields. An extension agent will also be able to track pest species movement across a larger region via generated pest maps. Farmers will be able to access all the information related to their fields and pests via this web interface, but only their specific data due to privacy concerns.

Overall, the MyFields Mobile project will provide an interface for farmers to manage their fields digitally, track pest growth and movement in those fields, store that information securely in the cloud, and give extension agents the ability to access that information across larger regions for the purposes of researching and tracking invasive pest species. This functionality will be encompassed in two separate apps for Android and iOS respectively.