**Importance of crop diversification (prospective clients)**

Crop diversification can lift yields, suppress pests, and minimize risk of single crop failure – when done right. Diversification done wrong can be a costly change to tried and tested crop and product usage without delivering any of the benefits.

Every agricultural system is different, and change requires good monitoring and analysis to assess how new cropping systems interact with local climate, soils, and wildlife. Good analysis requires good data, which is challenging to collect directly from agricultural systems.

EcoData has been working with a multinational client to extract high quality data from standard crop performance metrics. We worked with our client to determine which metrics were required to answer their questions, within their capabilities. Our bespoke data pipeline handles the messy realities of raw agricultural data without the need for specialized training at the point of collection.

**Databasing and forecasting (Current clients)**

Growers want to know how management decisions will impact their bottom line. To answer these questions for our client, we developed simulations that leverage our curated data to forecast a range of potential economic outcomes for their agricultural systems.

Our simulations project yields, expenses, and ultimately revenues by modelling crop growth and cultivation each month over a 25-year time horizon. By projecting under both optimistic and pessimistic assumptions, our client can assess the opportunities and risks associated with different scenarios using hard numbers.

All our business analysts have PhDs in the biological sciences and as much experience in the field as in front of a computer, bringing the necessary expertise to accurately capture the real-world complexities of living agricultural systems.

*Click to learn more about how our simulations work under the hood.*

*Sub-page: guts of the simulation*

* Overview of the parameters we take in – emphasises how approachable the data monitoring requirements are
* How we map those parameters to business goals. High-level pseudocode for the logic (is this too sensitive?)
* Overview of the outputs produced – emphasis on how valuable these are to a business.

**Dashboards for agroecology (skill showcase)**

Using our simulations, our client can ask how different agricultural plot designs will impact their business. We feed these ‘what-if’ scenarios into our simulations and return straightforward outputs through a feature-rich Tableau dashboard that the client can easily interrogate.

Our client can assess how yields, expenses, and revenues evolve each month and year over the course of the simulation. By slicing through the outputs, they can break these metrics down for individual crops or crop types as well as assess overall plot performance.

With the tools we’ve developed our client can explore potential opportunities and risks when adopting new crop varieties, rotations, or intercropping strategies at a granular level. With our help, our client has evaluated hundreds of agroforestry plots for 30 different crops to discover designs that maximize total and average monthly returns and crop yields for their farmers.

*Click to learn more about our client can interact with our simulation results.*

*Subpage: anatomy of the dashboard, show off some of the bells and whistles*

* Stress how tuned the dashboard is to our client’s needs to tell them exactly what they need to know in a straight-forward way
* Highlight the slicing/customization options the crop manager can use to explore ‘what-if’ questions, leveraging the data we advised them to collect to its fullest
* Perhaps an example business question and how to answer it with the dashboard, illustrating its value to explore hypotheticals