Description of Crop Yield Prediction Dataset

This dataset simulates a scenario where the goal is to predict crop yield based on various factors related to sustainable agriculture. The dataset includes information on climate type, soil type, irrigation method, crop type, pest control method, average temperature, rainfall, soil pH, and the target variable - crop yield per hectare.

**Possible hypothetical research questions**

1. How does the choice of irrigation method impact crop yield, and can a machine learning model predict optimal irrigation practices?
2. What is the relationship between average temperature and crop yield, and can this relationship be captured by a predictive model?
3. Does the use of organic pest control methods contribute to higher crop yield compared to chemical methods, and can a model quantify this effect?
4. How does soil pH affect different crop types, and can a machine learning model recommend suitable crops for varying soil pH levels?
5. Can a predictive model identify the most suitable crops for different climate types based on historical yield data?
6. What is the impact of rainfall on crop yield, and can a machine learning model predict optimal crop yield under varying rainfall conditions?
7. How well can machine learning models predict crop yield when considering the interaction effects of multiple factors, such as soil type and irrigation method?
8. Can a machine learning model assist in optimizing sustainable farming practices by considering multiple factors simultaneously, such as climate type, soil type, and pest control method?