

Week-02-L-05

Agricultural Statistics in Practice

Forecasting Techniques in Agriculture

Forecasting in Agriculture

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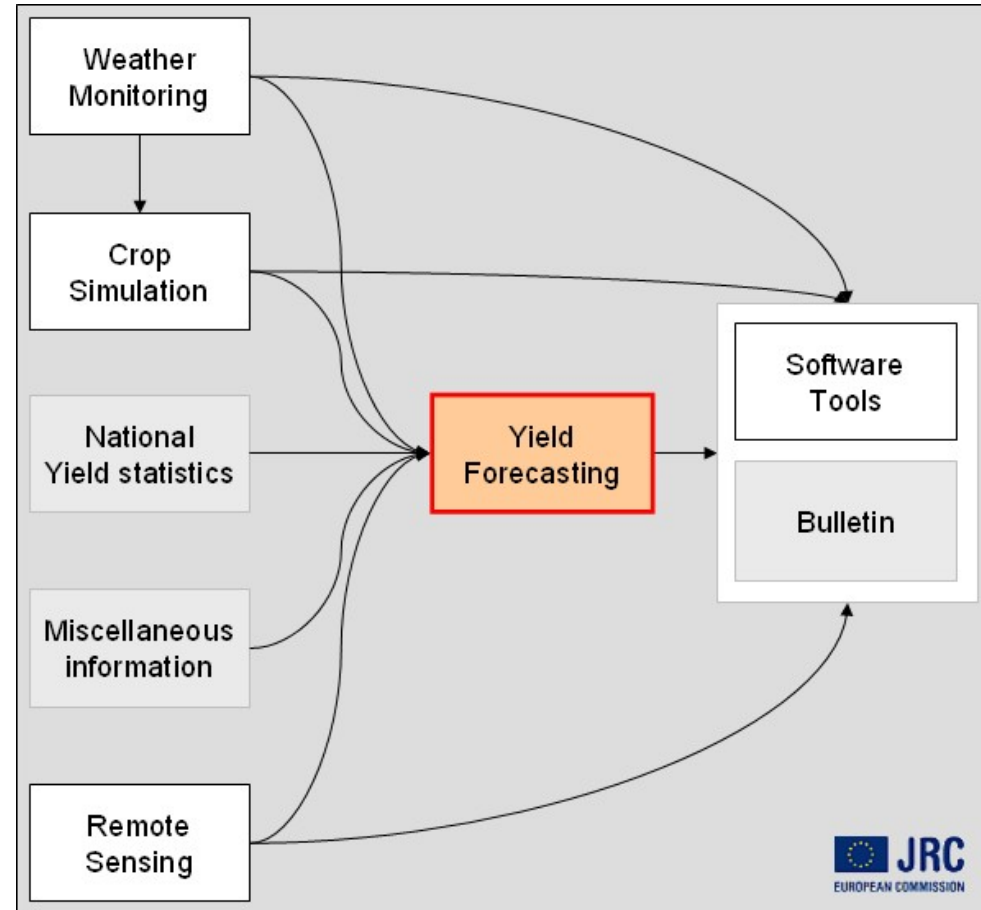
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Forecasting in Agriculture

- Agricultural forecasting uses historical data and statistical models to predict future farming trends.
- Factors like weather, market trends, and technology are analyzed to make accurate projections.
- It helps farmers and policymakers optimize production, manage risks, and improve productivity and profitability in agriculture.



Forecasting – Weather

- Weather forecasting in agriculture predicts rainfall, temperature, and extreme events impacting crop growth and yield.
- Accurate forecasts help determine optimal timing for planting, irrigation, pest control, and harvesting.
- Utilizing weather data and models can increase crop yield by up to 25% and reduce water use by 10-20%.

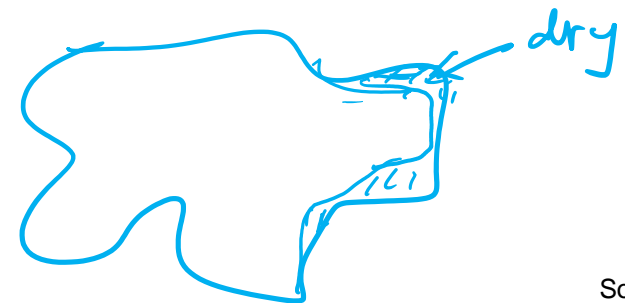


Source:
huffpost.com



Forecasting – Land

- Land forecasting predicts soil conditions, fertility, and crop suitability.
- Soil testing identifies nutrient deficiencies and necessary amendments for optimal crop growth.
- Land use planning models optimize crop rotation and allocation based on future land availability.
- Precision agriculture techniques like GIS mapping aid in land evaluation and management for sustainable practices.





Forecasting – Water

- Water forecasting predicts availability, rainfall patterns, and irrigation needs for agriculture.
- Crop water requirement models like FAO Penman-Monteith equation, estimate water needed for different crops,
- Water forecasting optimizes irrigation, reduces wastage, and enhances water-use efficiency.
- Integrated water management approaches conserve resources and aid in planning and implementing water-saving practices.

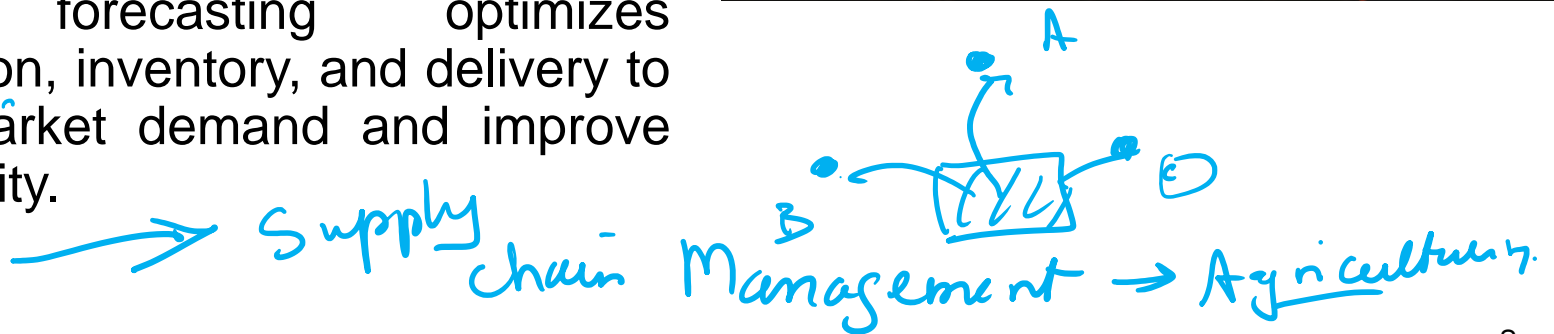


*drip irrigation
→ Horticulture*



Forecasting – Sales

- Sales forecasting predicts market demand and aids in production and marketing planning in agriculture.
- Market analysis and historical data estimate future demand and consumer preferences.
- Understanding market forces helps farmers make informed pricing decisions.
- Sales forecasting optimizes production, inventory, and delivery to meet market demand and improve profitability.



Thank You



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