DEMAND FORECASTING, GMOs AND THEIR IMPACT ON SEED MARKETING

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Demand Forecasting

- Demand is the quantity of seed that buyers are willing and able to purchase at a particular price
- Demand is not the same as the seed requirements by farmers
- The total amount of certified seed sold may be far much less than the total requirement
- The demand for certified seed exhibits intra-annual and seasonal fluctuations depending on weather, prices and amount of seed saved in previous season

Demand Forecasting (Cont'd)

- Demand forecasting is the process of making projections of demand for seed by examining past and present quantities purchased, combined with assessment of competition and market characteristics

- Demand forecasting is necessary for determining quantities of seed required by each crop and variety during a particular season

- Demand forecasting helps companies to plan production and distribution activities

- Although forecasting serves as an indication of quantities of seed required for each crop and variety, it ignores possible demand shift that may occur due to changes in production

Factors Influencing Seed Demand

1. Total cultivated area
2. Seed rate
3. Farmer awareness about certified seeds
4. Weather conditions
5. Adoption of complimentary inputs e.g. fertilizer
6. Accessibility to inputs
7. Distribution efficiency
8. Availability of credit

Actors in Seed Demand Forecasting

1. Seed stockists
2. Seed distributors
3. Agricultural extension service providers
4. Seed manufacturers
5. Meteorological department
6. Ministry of agriculture

Timing for forecasting

- Demand assessment before onset of a season is exposed to vagaries of weather conditions that increase the likelihood of demand variation or total shift in demand for varieties or type of crop

- More reliable weather conditions should be obtained close to onset of the season

- Accuracy of information is key. Inaccurate data leads to left-over or shortages

Data Considerations and Analysis

❑ It is important to differentiate between short-term and long term projections

❑ Type of data – quantitative indicators of demand (Total cultivated land, seed rate, quantities purchased, competitor's products)

❑ Should it be collected once or continuously?

❑ Analysis: multiple regression

Forecasting Techniques

1. **Leading indicators**: used for making short term forecasts. Indicators should be weighed by their importance

2. **Surveys**: stratified random sampling; cluster sampling are helpful in short-term forecasting

3. **Graphical extension of trends**: historical data plotted to recognize trends that are occuring in cycles and seasonalities

4. **Percentage growth rates**: looks at growth rate over the years. A poor method of forecasting

5. Expert estimates

GMOs: What are they?

❑ The use of modern biotechnology to alter the DNA characteristics of a crop

❑ Common in soybean, cotton and maize

❑ Adopted and resisted in equal measure depending on attitude, government policies that vary from one country to another

Impact of GMO on Seed Marketing

❑ Three possibilities: No impact, positive, negative

❑ No impact where the law outlaws growing of GMOs

❑ Negative impact if the GMO has desirable characteristics by farmers, but the seed company do not respond to competition by developing superior variety

❑ Positive impact if the seed company is selling GMO that has high demand due to its desirable attributes