



What Industry Wants from Consultant Trials: Large and Small Test Plots

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Pesticide Discovery/Development



- Discovery :
 - Laboratory/Greenhouse/Small Field plots
- Optimization:
 - Greenhouse/Small field plots
- Development:
 - Small replicated plots
- Launch:
 - Larger replicated plots/demo plots
- Marketing:
 - On-farm grower demos

Intensity/cost of testing effort

Components development cycle



Test Substance
Expensive Economical

Equipment
Research Commercial

Plot Size
Small Large

Type and purpose of testing changes during the development process.



- Does the chemistry have any potential utility?
- Does it work in whole plants?
- Does it work in the field?
- Is it biologically competitive with other products?
- Is it economically competitive with other products?
- Is it environmentally compatible?

Progress over time



- 1950-1990 – most anything would suffice, run a test submit data, industry accepted it.
- 1990s – shift to cost effectiveness in the development process.
- Specific research needs identified:
 - Method of submission moved from paper to electronic
 - Use of data across regions to increase utility of data collected over time and space.
- Data analysis made giant step changes:
 - Statistics and data mining added value to the data.
- Regional programs have yielded to global projects.

"Data Quality" is critical today



- How is quality defined?
 - Proper trial conduct:
 - Crop, pest as desired
 - Use rates as desired
 - Product comparisons as desired
 - Data reporting as desired:
 - Proper format (standard codes, units, scales)
 - Timely submission
- Swift Data flow essential to speed decision making which decreases the time from discovery to market introduction around the world.
- Regulatory Harmonization has increased the incentive to follow global development programs, increasing importance.

How do you know what is desired?



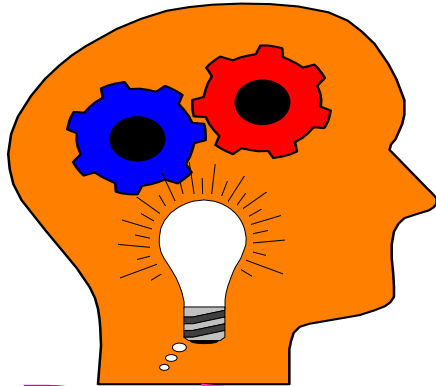
- **PROTOCOL or Study Plan.**
 - Read it.
 - Study it.
 - Question it.
 - Suggest, upgrades.
 - Confirm the final intent of the study.
 - Confirm that you know what is desired.

Can you do the work?



- Do you have the equipment, the season, the crop, the pest, the staff, and the interest to do the work entailed by the project?
- Can you meet the timeline?
- Can you provide the report at the time it is indicated?
- Can you be business effective in the conduct of the study?
- If the answer to each of these question is yes, then ask, “Do you really want to do this work?”

Product Attribute Characterization



Residual

Insecticidal Potency

Active on large larvae

Tank Stability

Time To Kill

UV Stable

Volume and Conc

Surfactants???

Contact vs Ingestion

Plant Protection

Resistance

ANTIFEEDANT

Insect Spectrum

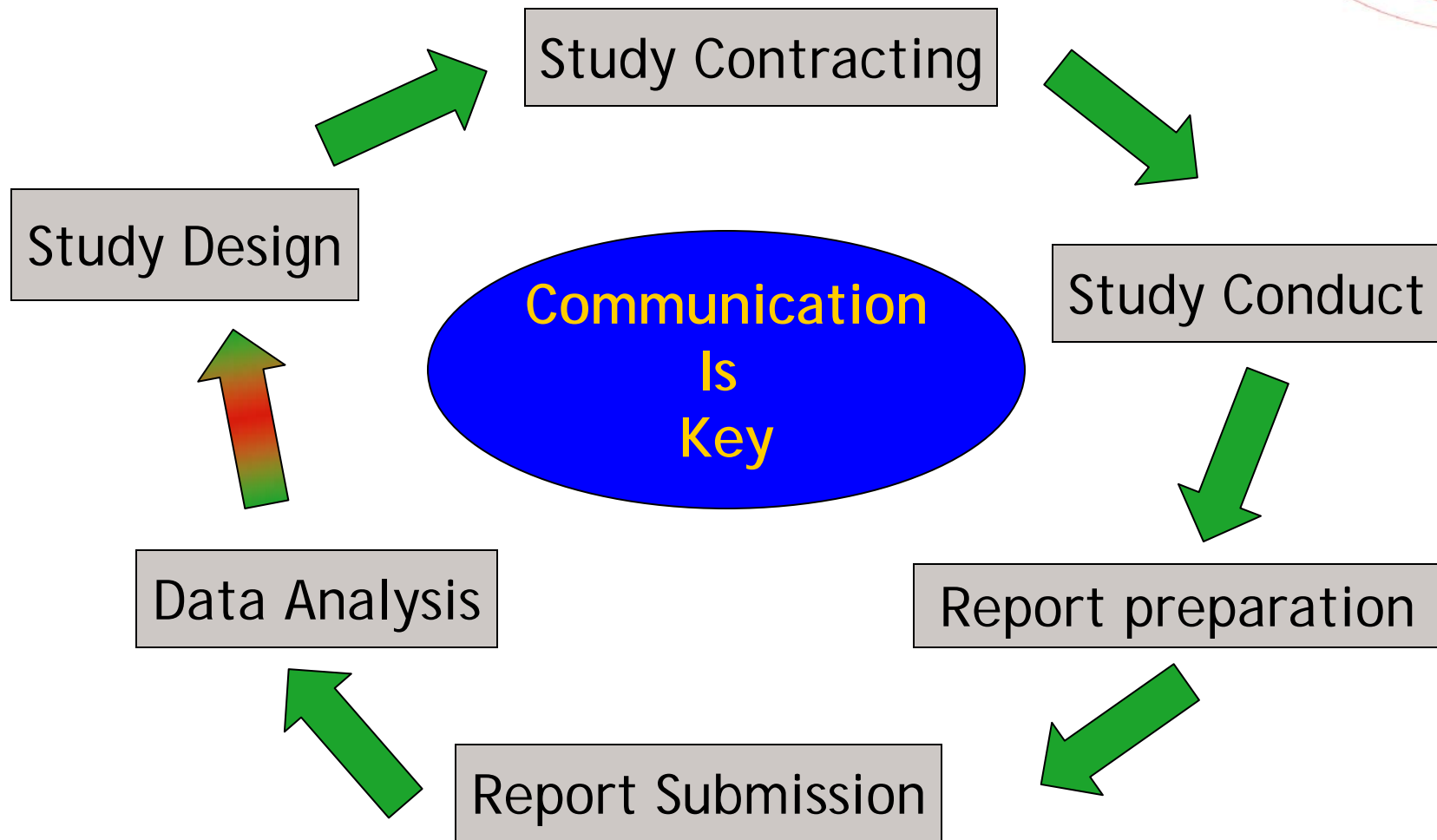
Drying Time



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Successful Process Flow



Overall Concept



- Good trial design, implementation, conduct, and reporting will lead to uniform data.
- Uniform data leads to more powerful and useful data analysis.
- Successful data analysis effectively converts data into high quality information/knowledge.
- High quality knowledge leads to useful product labels and successful pest control.



Typical Problems

- Common problems observed:
 - Missed application timing.
 - Missed evaluation timing, or wrong evaluation intervals.
 - Inappropriate or atypical rating system.
 - Damage attributed to wrong pest.
 - Not including the designated standard treatments.
- **Result: The data loses value, cannot be compared or summarized with other data across larger geographical regions.**

Things that are not helpful.



- Late communication of problems.
- Late submission of reports.
- Snowball reports – not providing what was requested, but sending a lot of other information in the report.

What sponsors need from Cooperators today.



- Good project management skills.
- Able to routinely conduct trials which yield high quality data.
- Technically proficient with the desired software tools for report preparation.
- Thorough reports are submitted on time.
- Feedback of the process and the trial.

Summary



- Follow the protocol.
- Discuss any deviations or unexpected observations with the sponsor.
- Every experiment can be instructive if we have close enough observation to know what went according to plan and what did not.
- Communicate, communicate, communicate!!



Questions??