Encouraging the Use of Drift Reduction Technologies for Pesticide Applications --What's in Store for 2007?

Jay Ellenberger
US EPA/Office of Pesticide Programs

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EPA's Drift Reduction Technology Program

Goals

- The acceptance and use of a larger variety of verified drift-reducing technologies
- Reduce off-target spray drift, risks, and impacts on the environment and humans

Process

- Validate DRTs' effectiveness through testing
- Credit use in OPP's risk assessment and risk management decisions on labels and in the field
- Encourage DRT use through allowing greater flexibility in drift management

What are the barriers / challenges to the use of DRTs?

- Experts meeting in Indianapolis – January 2003
- Equipment manufacturers, registrants, academic / government researchers, regulators, extension
- Most significant challenges identified:
  - No established U.S. program to verify DRT performance
  - Currently no mechanism to reward use of DRTs in EPA risk assessments and on pesticide labels

EPA – experienced in technology performance verification

- Environmental Technology Verification (ETV) program
- Superfund Innovative Technology Evaluation (SITE) program
- Energy Star

DRT Project--Strong Interest to Date

- Pesticide Registrants
- Adjuvant Producers
- Applicator Groups
- Sprayer Manufacturers
- Academic Researchers
- USDA ARS, NRCS
- Pursuing others
  - Grower Groups
  - Insurance Companies

DRT Project receiving high visibility in EPA

Environmental Technology Council

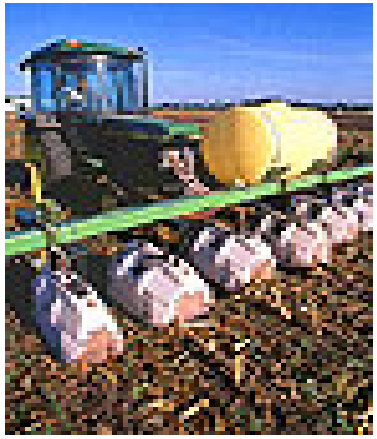
- Established by the EPA Administrator
  - To achieve improved, real world environmental results through the application of innovative technology
  - Identify priority environmental problems needing new approaches
  - Coordinate efforts by EPA and others to identify and implement technology solutions
  - Partner with other Feds, states, tribes, non-profits, and industry

Initial Focus?

Current focus: ground & aerial application of row & field crops

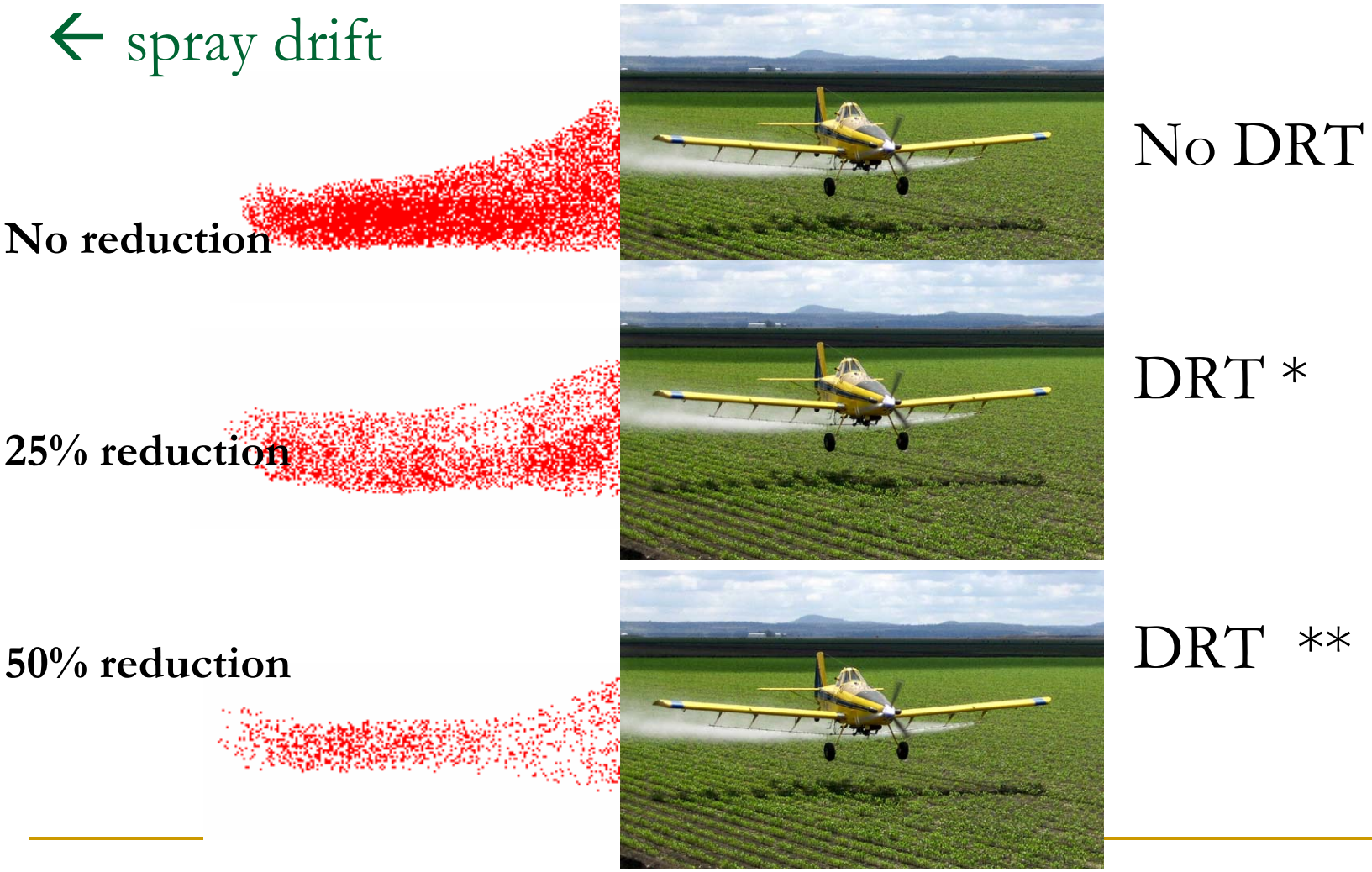
Examples:

- Low Drift Nozzles/Atomizers
- Electrostatic Sprayers
- Shields/Shrouds
- Air Assisted Sprayers
- Spray Tank Adjuvant Drift Retardants
- Windbreaks

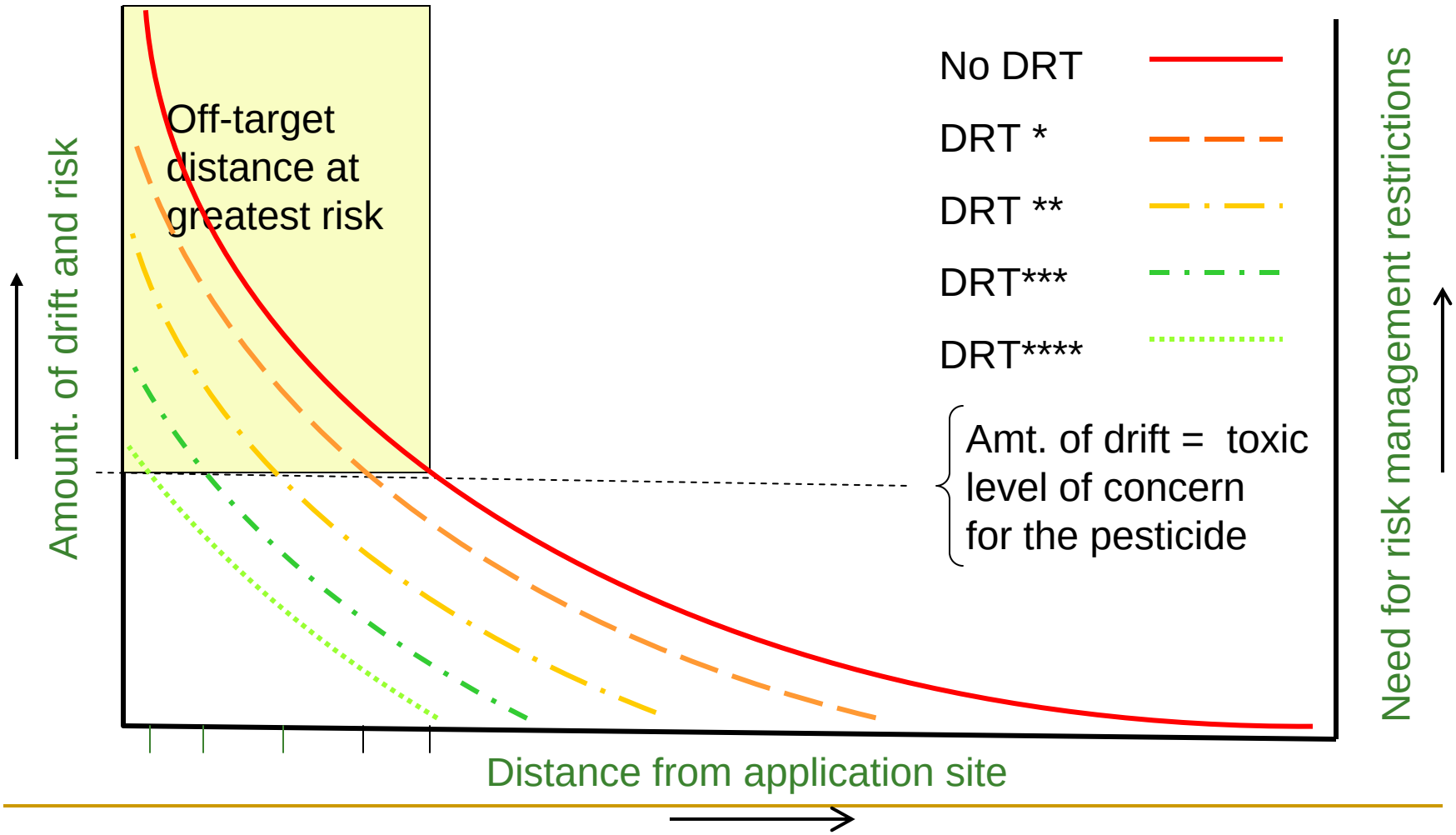


Communicating DRT Performance on Labels – Stars *

← spray drift



Relationship Between Application Technologies, Amount of Drift/Risk, and Risk Management



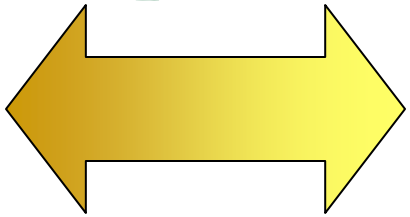
Use of Results

- The drift reduction associated with a DRT's use could be used by EPA to develop spray drift reduction factor
- Spray drift reduction factors could be incorporated into EPA pesticide risk assessments:
  - Drinking water assessments
  - Aquatic organism assessments
  - Terrestrial plant assessments
  - Special assessments
- Allow more labeling options for pesticide products to manage spray drift

Example of Possible DRT Incentives on Label

Application Equipment	Release Height	Buffer Size (ft)
Standard application equipment	High boom	80
	Low boom	40
DRT*	--	20
DRT**	--	0

This effort can be a winner for multiple stakeholders



- Gives greater flexibility to growers/applicators to meet or improve on drift requirements
- May lower overall costs of spraying
- Supports private-sector technology development
- Reduces impact of spraying on humans and ecosystems

Accomplishments/Progress

Scoping meetings of DRT idea with industry, academic, and government experts	2003-4
Awarding of ETV grant	2005
Report on DRTs and published tests methods	2005
First DRT meeting with technical panel	January2006
Draft of test protocol for panel/public review	June 2006
Second DRT meeting with technical panel – review of draft protocol	July 2006

Next Steps and Schedule--2007

Complete test protocol and make available	March 2007
Select reference (baseline) technologies	Ground—Completed Aerial—March 2007?
Publish FRN soliciting volunteer equipment manufacturers to have their equipment tested (EPA pays for initial tests)	April-May 2007
Select qualified wind tunnel testing facilities	April-May 2007
Conduct test of new protocol with volunteered equipment; verify quality of protocol	July 2007
Start review of completed initial studies	September-October 2007
Begin using verified DRTs in risk assessments and on product labels	Winter 2007-8

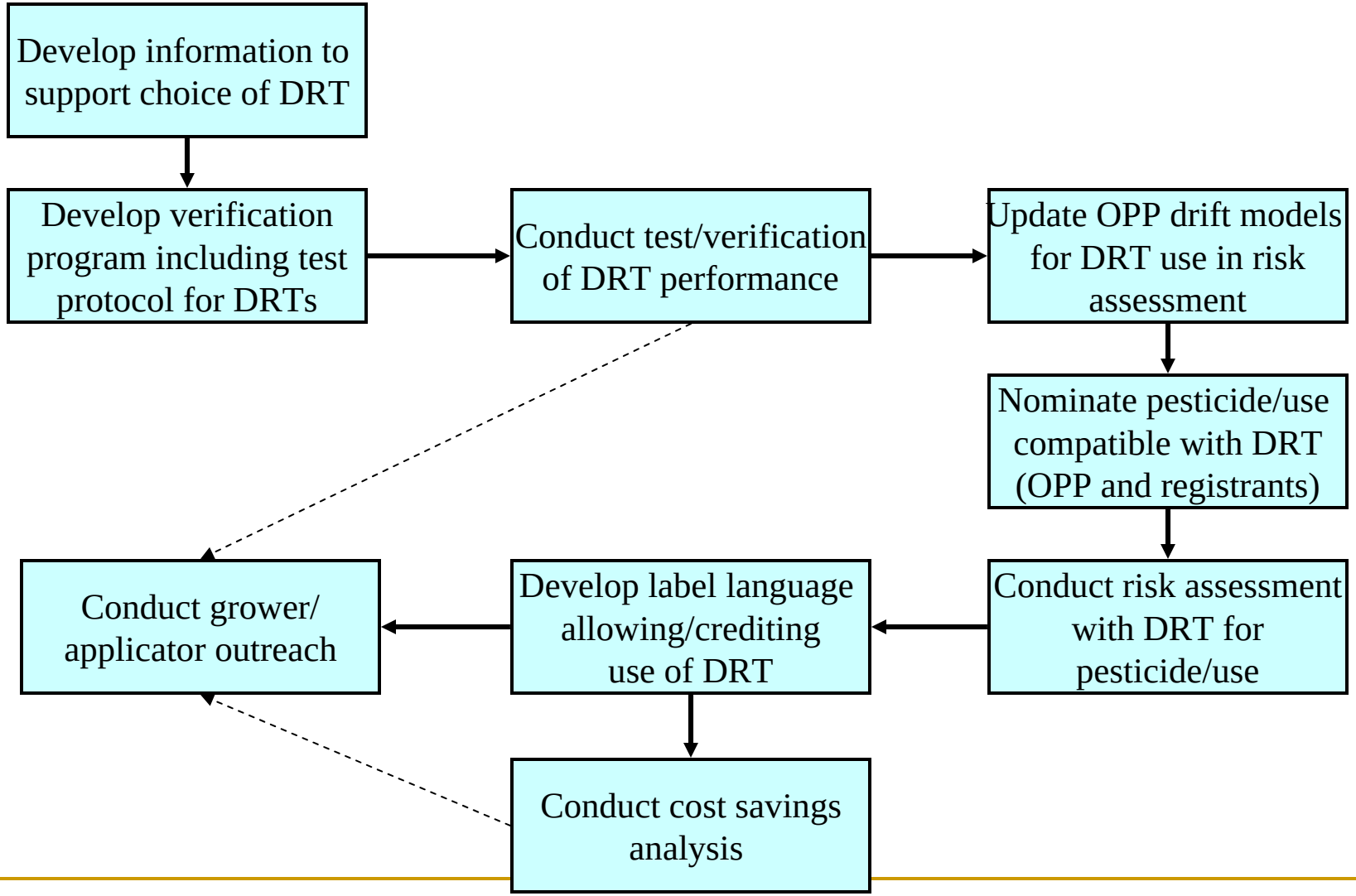
Thank You

Questions?

Discussion

- Extra slides follow

DRT Pilot Process



- **Pesticide manufacturer or OPP nominates pesticide/use which may benefit from DRT availability**
- **OPP conducts risk assessment with use of proposed DRT versus standard application equipment**
- **Label language developed giving incentives for use of DRT**
  - **Lower level of risk measures needed to achieve desired protection**

Communicating DRT Performance

- **In the U.S. a "star" rating would be assigned by EPA based on each manufacturer's DRT test**
  - Use the International Standards Organization's standard for classifying performance of DRTs: 25%, 50%, 75%, 90%
- **Product labels would have appropriate drift/risk reduction measures for one or more DRT categories**
- **DRTs would be 'labeled' with their appropriate star rating**
- **Product labels should NOT specify specific DRTs (e.g. model/make)**

Benefits

- DRTs' potential for spray drift reduction validated
- OPP and registrants can incorporate DRTs in risk assessment and management decisions
- Can use labeling and other existing programs to communicate and encourage use of DRTs
- Gives growers and applicators more flexibility in making pesticide applications
- Gives incentives to equipment manufacturers to manufacture/sale DRTs
- More common use of DRTs has potential to reduce total spray draft and incidents
- Fits within international system and practice