



United States Department of Agriculture

# **Status Check: RBS at Plant Inspection Stations**

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# Overview

**History**

**Rollout**

**Reality check**

**Keys to success**

**Program consideration**





United States Department of Agriculture

# Plant Inspection Station History

## Prior to 2010

### Country - commodity discussions



### Challenges with data

### Challenges with monitoring



# Collaboration of 2010

## 1) Possible release program

- Propagative Material Release Program
- Limiting and restrictive

## 2) Begin strategy for sampling program

- Statistically robust
- Operationally feasible
- Establish baseline
- Meet the goals of the Strategic Plan



# PIS Strategic Plan

**Goal 1:** Ensure plant inspection stations have the infrastructure and resources to clear shipments effectively in light of the increased volume and complexity of trade.

**Objective 1.1:** Understand the current and projected workload, the business trends, and the impact of proposed regulatory changes and other initiatives on the plant inspection station infrastructure and resources.

**Objective 1.3:** Establish a strategic approach for conducting plant inspection station activities and managing the workload.

**Goal 4:** Ensure the plant inspection stations use data resources and information for identifying and inspecting the highest-risk material and pathways.

**Objective 4.1:** Collaborate with appropriate groups to develop the capacity within the plant inspection station system to gather and analyze information to determine risk and set inspectional priorities.

4.2.5. Establish and use a standardized analytical framework for determining risk to set inspectional priorities (high risk materials and/or pathways):

- Determine what is coming in (genus, species, and cultivar) and the pathway (how entering);
- Determine where the material/shipment is coming from (true country of origin, transit country and place of production);

# Rollout to Plant Inspection Stations

- Staggered roll out in Fiscal Year 2014
- All locations implemented by Oct. 1, 2015
- Statistic sampling throughout container
- Inspection of the samples pulled





# Definitions

## *Inspectional unit:*

“The single lowest, readily- distinguishable taxon, cultivar, or variety that is clearly defined as being from one source (from the same farm or grower) and in similar condition (e.g., air layer (AL), bare root (BR), callus cutting (CC), rooted cutting (RC), unrooted cutting (URC), etc.) on the invoice, packing list, or phytosanitary certificate.”



# Definitions

## *Sample Unit:*

“The smallest, **most convenient** element of an inspectional unit available for selection during the sampling process (e.g., bag, box, bundle).”

## *Plant Unit:*

“The smallest unit in the inspectional unit (e.g., cutting, plant, stem).”





Item Description	Code/Codigo	Boxes/Cajas	Piezas/Unidades
Croton Petra URC 8"	213-237	25	10,000

**Risk-based Sampling**  
Estimation of sample size and identification of units to sample based on commodity risk

**Inspectional Unit Inputs**

(A) Total number of taxa in the inspectional unit

(B) Total number of sampling units in the inspectional unit

(C) Total number of plant units in the inspectional unit

(D) Commodity Risk Level  
 High  Medium

**Analysis Outputs**

(E) Number of boxes to inspect

(F) Box numbers to inspect



# Reality Check: RBS in the Real World

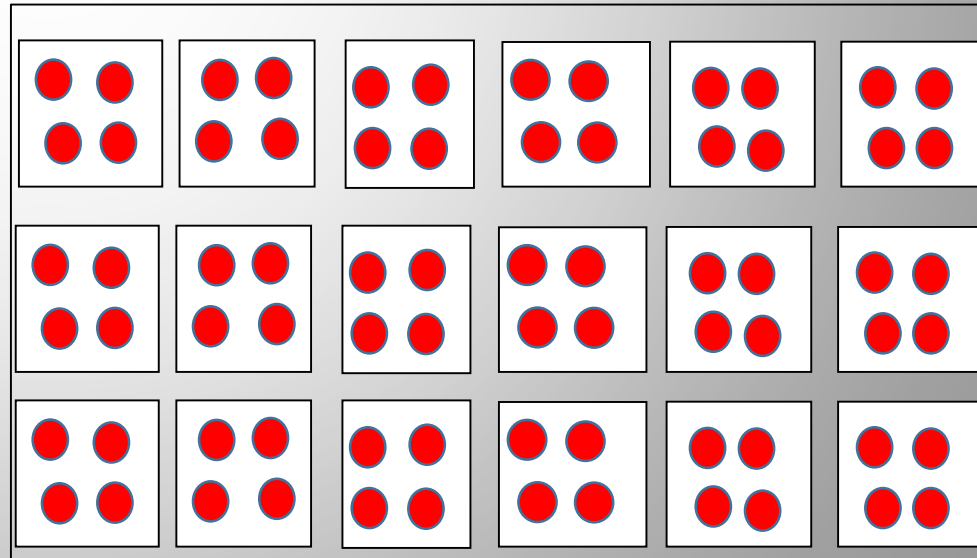
- Cargo makeup: Singling, Mingling & Commingling
- Sample unit: Distribution & Versatility
- RBS tool: The tool can be cool
- Handling hang-ups: Flexibility & Feasibility

# Cargo Makeup: Singling (not commingled)

Entire shipment made of all one single taxa

Boxes, bundles, baggies:

*Straight forward sampling based on units*





Boxes: (1000 per box, 18 boxes)

Baggies: (200 baggies per box; 3600 total baggies w/5 plants each)

Inspectional Unit Inputs

(A) Total number of taxa in the inspectional unit

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Inspected 2000 plants  
Less distribution

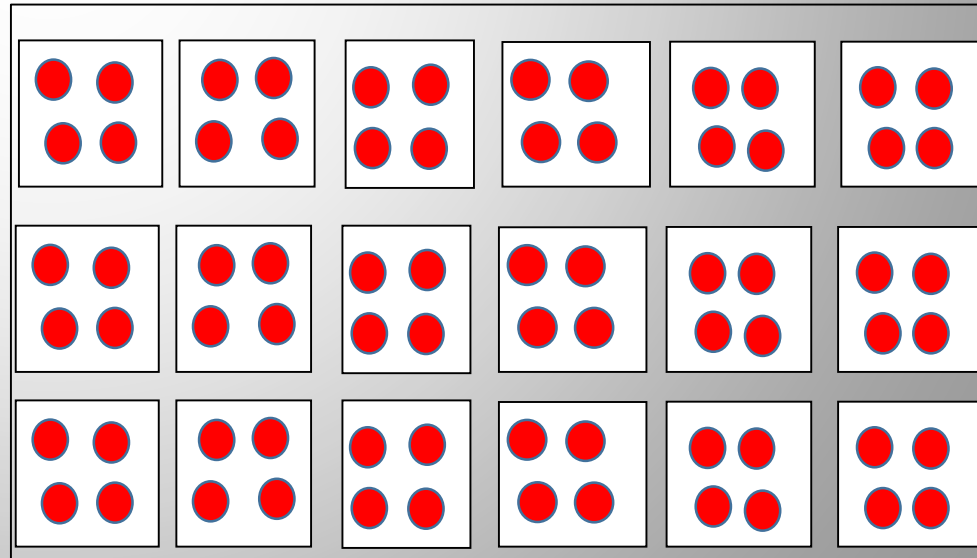
Inspected 75 plants  
Better distribution

# Cargo Makeup: Singling (not commingled)

Entire shipment made of all one single taxa



Towers, shelves, plant units  
*Flexibility; Feasibility  
Distribution; Versatility*



# Bulk option: use plant unit as sample unit

## Inspectional Unit Inputs

(A) Total number of taxa in the inspectional unit	1
(B) Total number of sampling units in the inspectional unit	18000
(C) Total number of plant units in the inspectional unit	18000

Inspected 74 plants  
Better distribution

## Analysis Outputs



1917	2160	2403
4104	4347	4590
6291	6534	6777
8478	8721	8964
22	10665	10908
12366	12609	
14067	14310	
15768	16011	
17469	17712	

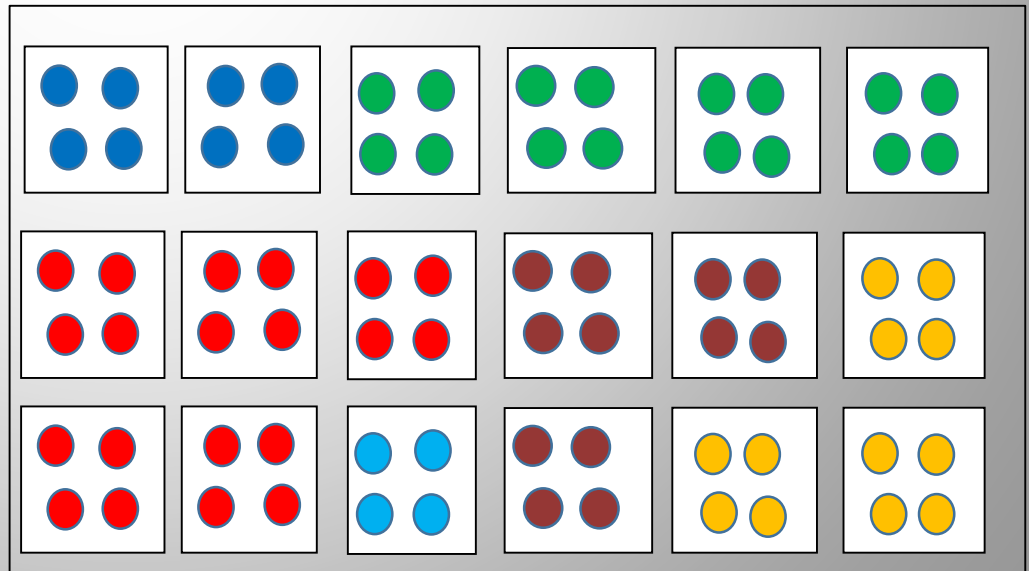
# Cargo Makeup: Mingling

Shipment of many different taxa, all separated by inspectional unit

Run each taxa







Run as commingled

\*\* Consider the sample unit





# Mingled shipment options:

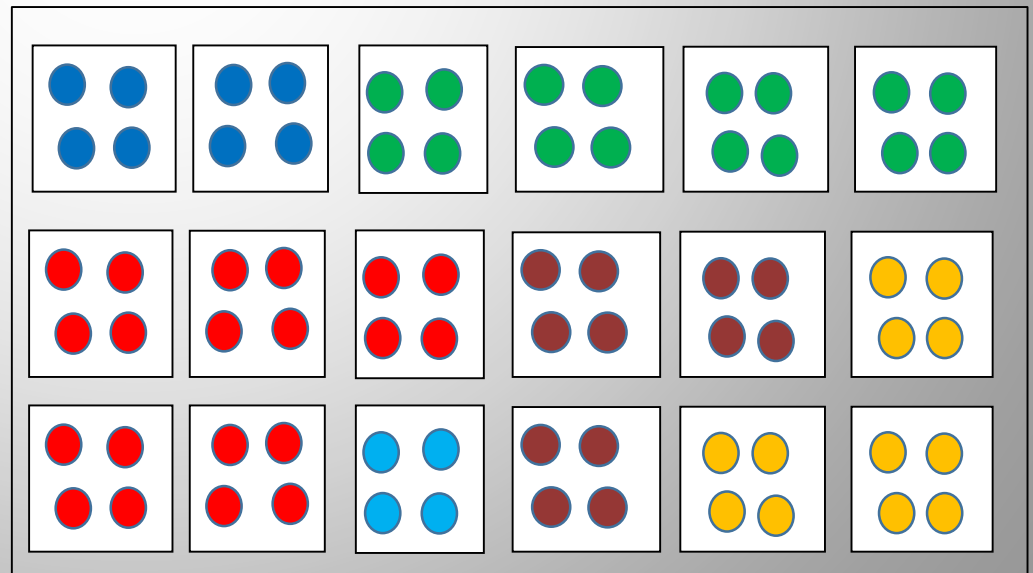
TAXA	# Boxes	# Plant Units	Tool Output per Taxa		
			By box	By baggies	By plant unit
	2	2000	1 box	15	73
	4	4000	1 box	15	73
	5	5000	2 boxes	15	73
	1	1000	1 box	15	71
	3	3000	1 box	15	73
	3	3000	1 box	15	73
<b>Totals:</b>	<b>18</b>	<b>18000</b>	<b>7 boxes</b> (7000 plants)	<b>90 bags</b> (450 plants)	<b>436 plants</b>
<b>Tool output if ran as whole commingled shipment</b>			<b>Boxes: 6</b> (6000 plants) <b>Baggies: 92</b> (460 plants)		



# Cargo Makeup: Mingling

Ships that are not likely to be on red need frequency  
 Considerations of mingling by each tank.

- *Everything considered at same risk level*
- *\*\*Quarantine pest may impact whole shipment*
- *Inspection workload can adjust by taxa*



# Cargo Makeup: Commingling

Shipment of many different taxa, all mixed together

**\*\* Quarantine pest may impact whole shipment**

**Risk-based Sampling**

Estimation of sample size and identification of units to sample based on commodity risk

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**Inspectional Unit Inputs**

(A) Total number of taxa in the inspectional unit

(B) Total number of sampling units in the inspectional unit

(C) Total number of plant units in the inspectional unit

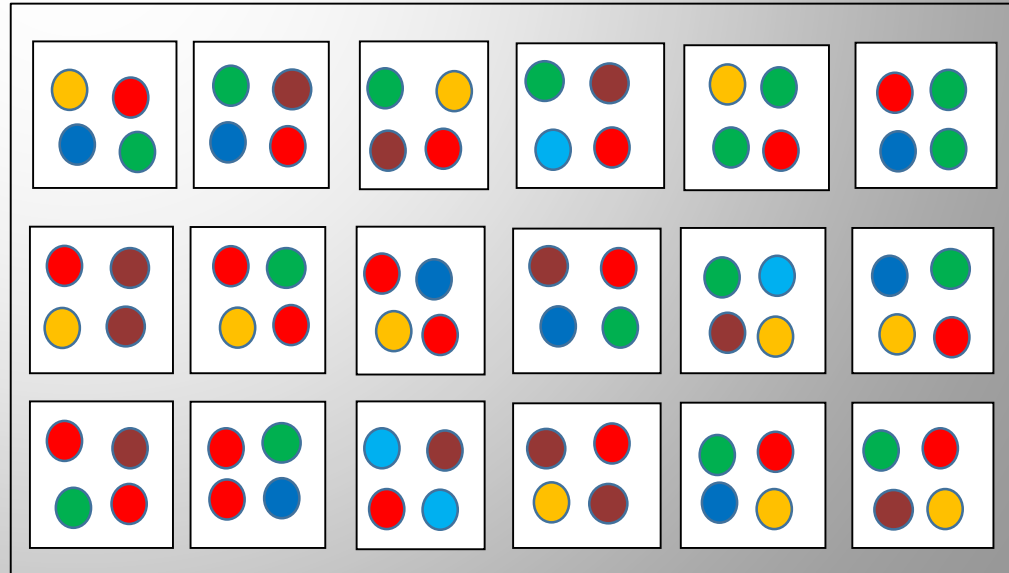
(D) Commodity Risk Level  
 High  Medium

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**Analysis Outputs**

(E) Number of boxes to inspect

(F) Box numbers to inspect





# Keys to success: implementation & adjustment

## Respect highly trained workforce

- Dedicated to PPQ Mission
- PIS guiding principles

## Reinforce the knowledge; acknowledge

- Data reinforcement of what they know
- Providing analysis information & feedback

## Flexibility

- Provides ability for officers to handle unique cargo situations
- Consider the wide variety of cargo volumes and make-up

## Collaboration

- Working with each location to handle specific situations
- Use their feedback to adjust; or provide responses on why not





# Program considerations moving forward

## Data make-up

- 2014 staggered implementation; limited by database
- 2015 full implementation; limited by database
- 2016 new database; staggered implementation
- 2017 new database; fully implemented





# Program considerations moving forward

## Vision

- Continue to work with analyst to review data
- Evaluate proposed adjustments for feasibility
- Engage with analysts to look at potential options
  - Country-Commodity
  - Country-Propagative Type
  - Country-Commodity-Propagative Type
- Facilitate successful rollout of changes to employees
- Strive to meet the goals of the Strategic Plan



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**Thank you**