

2013

FNABC Annual Meeting

Stock type Simplification

Small, Medium, Large



Stock Types Container Size Available (Partial List)

Stock types

- PSB - Plug Styroblock
- PCT Plug Copper Treated
- PAP Plug Air Pruned
- PBR Plug / Bareroot Transplant
- PPT Plug to Plug Transplant
- PSI Plug Styroblock I-Wrap
- PCI Plug Copper Treated I-Wrap
- BBR Bareroot
- BRL Bareroot Large
- CRC Rooted Cutting

Container sizes:

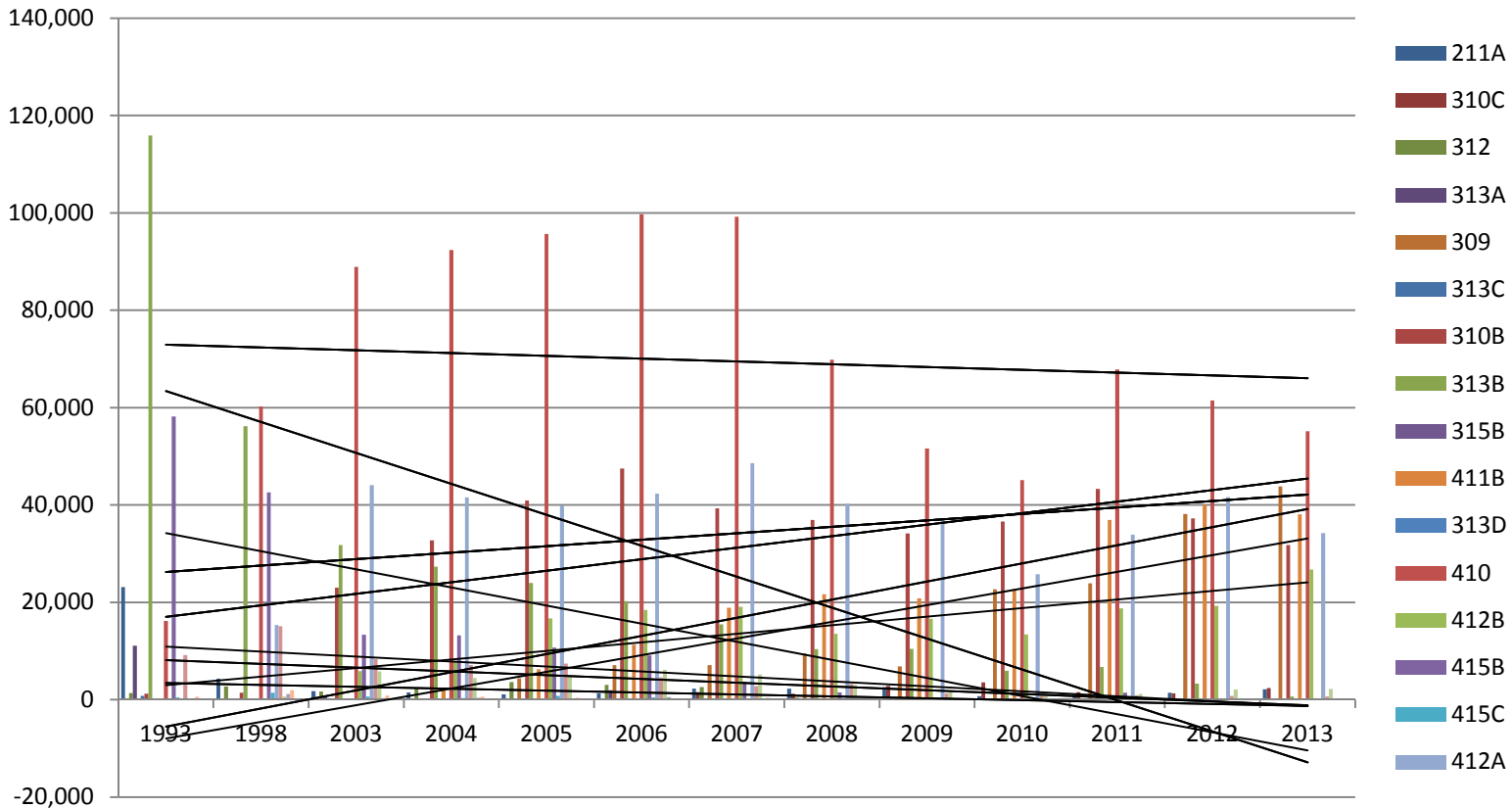
- 211A - 240 cavities per block
- 310C, 312, 312A – 198 cavities
- 309A, 313C - 180 cavities
- 310B, 313B, 315B - 160 cavities
- 411B - 144 cavities
- 410, 412B, 415B - 112 cavities
- 415C – 91 cavities
- 412A, 415D - 77 cavities
- 515A, 512A - 60 cavities
- 615A - 45 cavities
- 615B - 28 cavities

Stock Type Simplification Trends - The Last 20 years

- Looked at data in SPAR for 1+0 stock from 1993 to 2013.
- Identified significant stock size shifts and trends.
- Results were compiled, analyzed and graphed to show simplistic trends.

**ALL COMBINED THE RESULTS LOOKED AS
FOLLOWS:**

Stock Type Simplification Trends in The Last 20 years



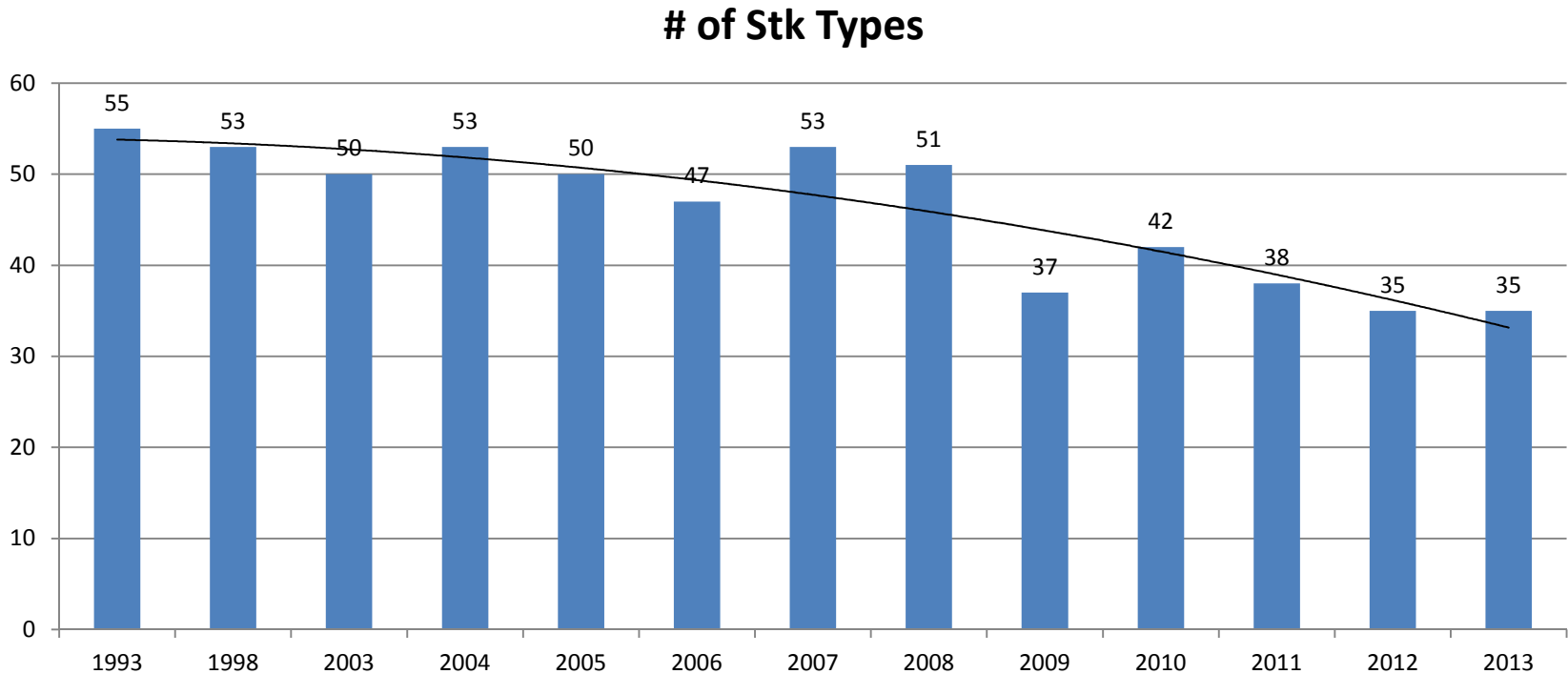
Simplistic – NOT!

Stock Type Simplification

The Last 20 years

So... Lets look at this a little more closely breaking the information out into smaller chunks.

Number of Stock Types Selected by Year of Plant



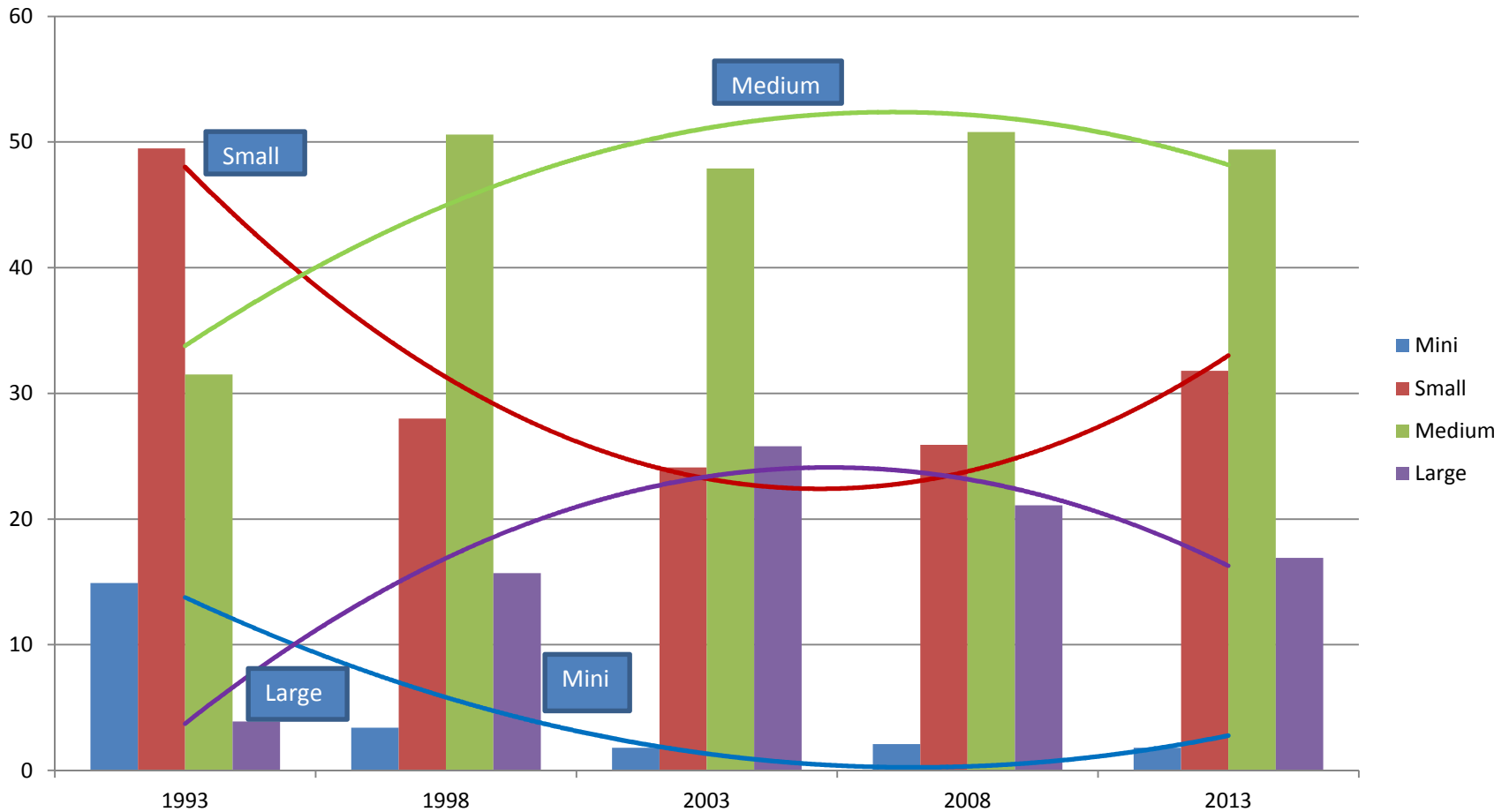
Trends - # of stock types being selected is actually shrinking.

Categorization of Stock Types for this Presentation

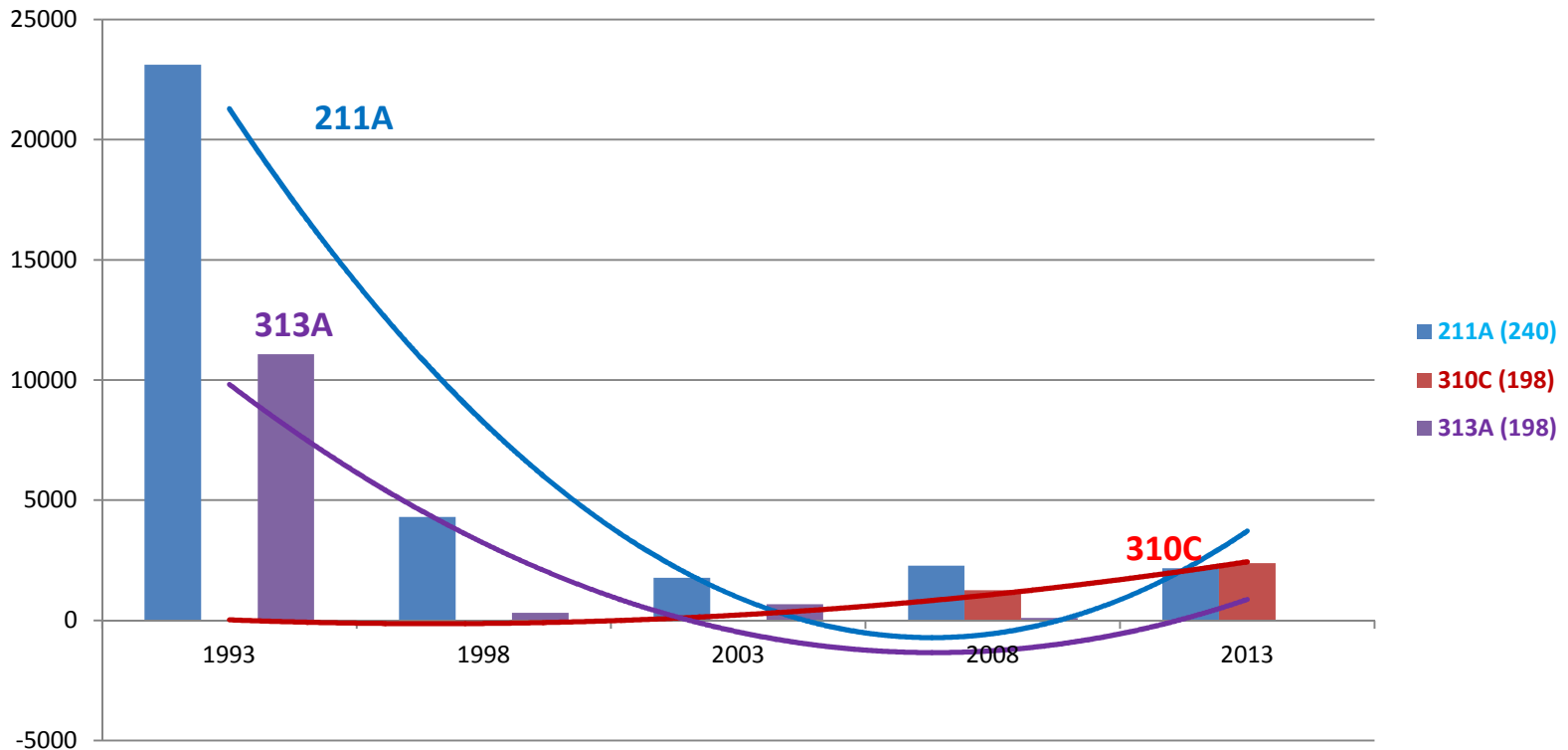
- Mini = 198 cavities and > (e.g. 310C, 211A)
- Small = 160 to 180 cavities (e.g. 301B, 309)
- Medium = 91 to 144 cavities (e.g. 415C, 411B)
- Large = 60 to 77 cavities (e.g. 512A, 412A)
- Jumbo = 15 to 45 cavities (e.g. 1015, 615A)

Overall Trends in Categories

5 Year Increments

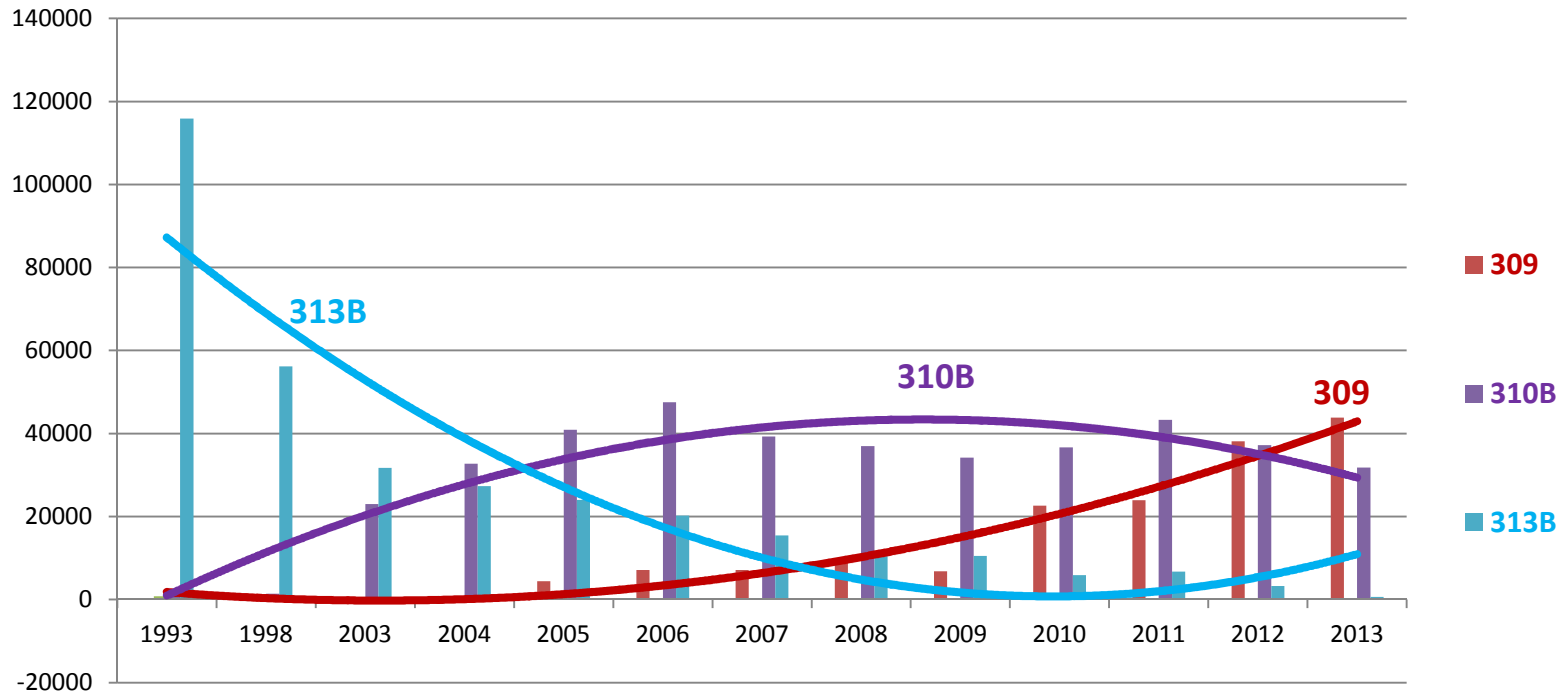


Trends by Sowing Year - Mini



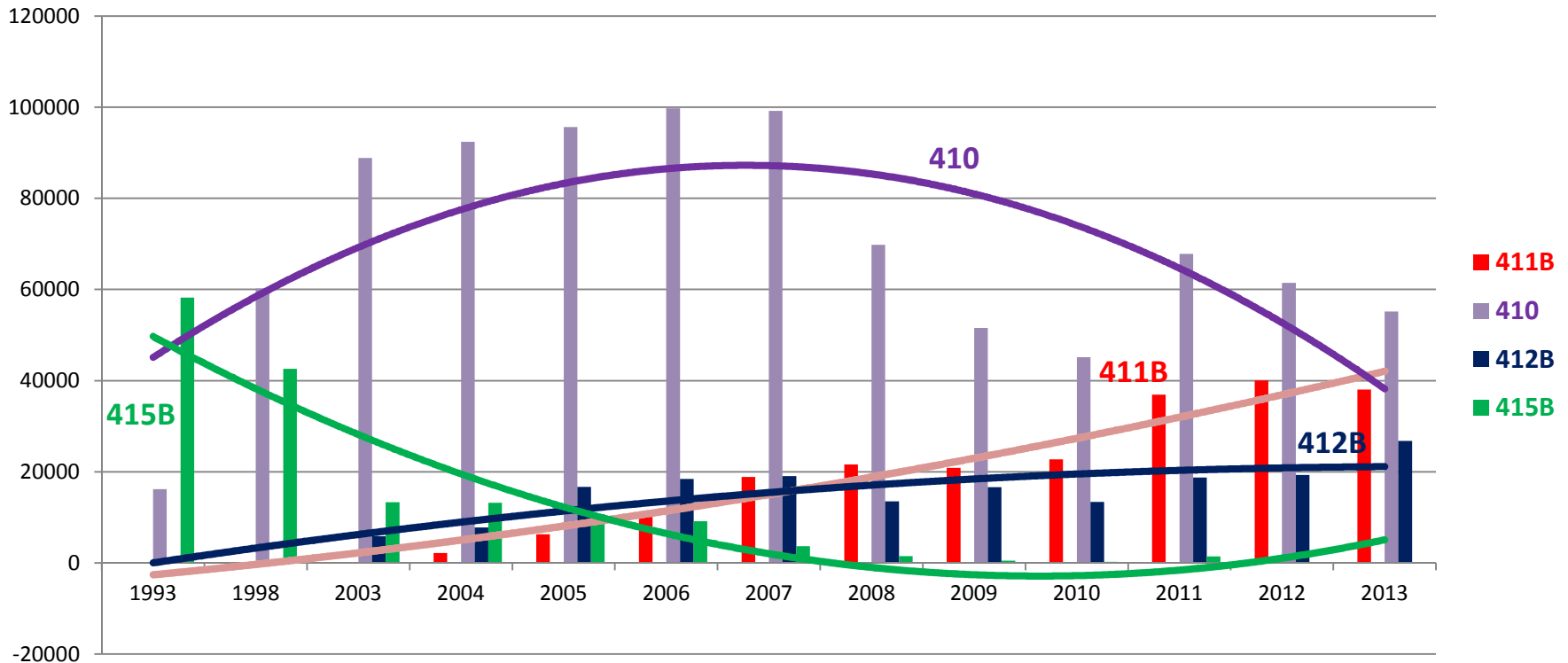
- All mini's have experienced decline. Recent small resurgence in 211A and 310C.

Trends by Sowing Year - Small



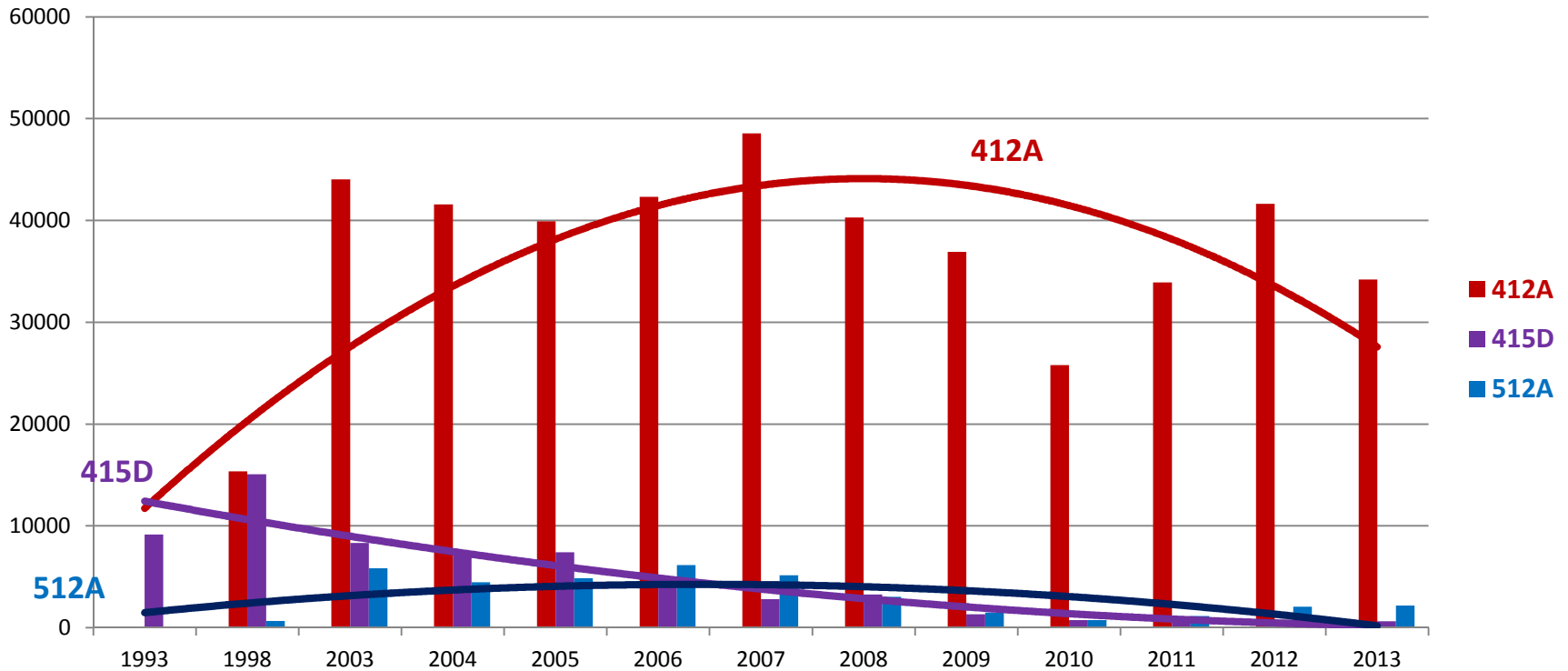
- 309's rapidly increased from 2008 on.
- 313B's have seen a steep decrease in use.
- 310B's increased until 2008 and then starting falling off (309's began to replace them).

Trends by Sowing Year - Medium



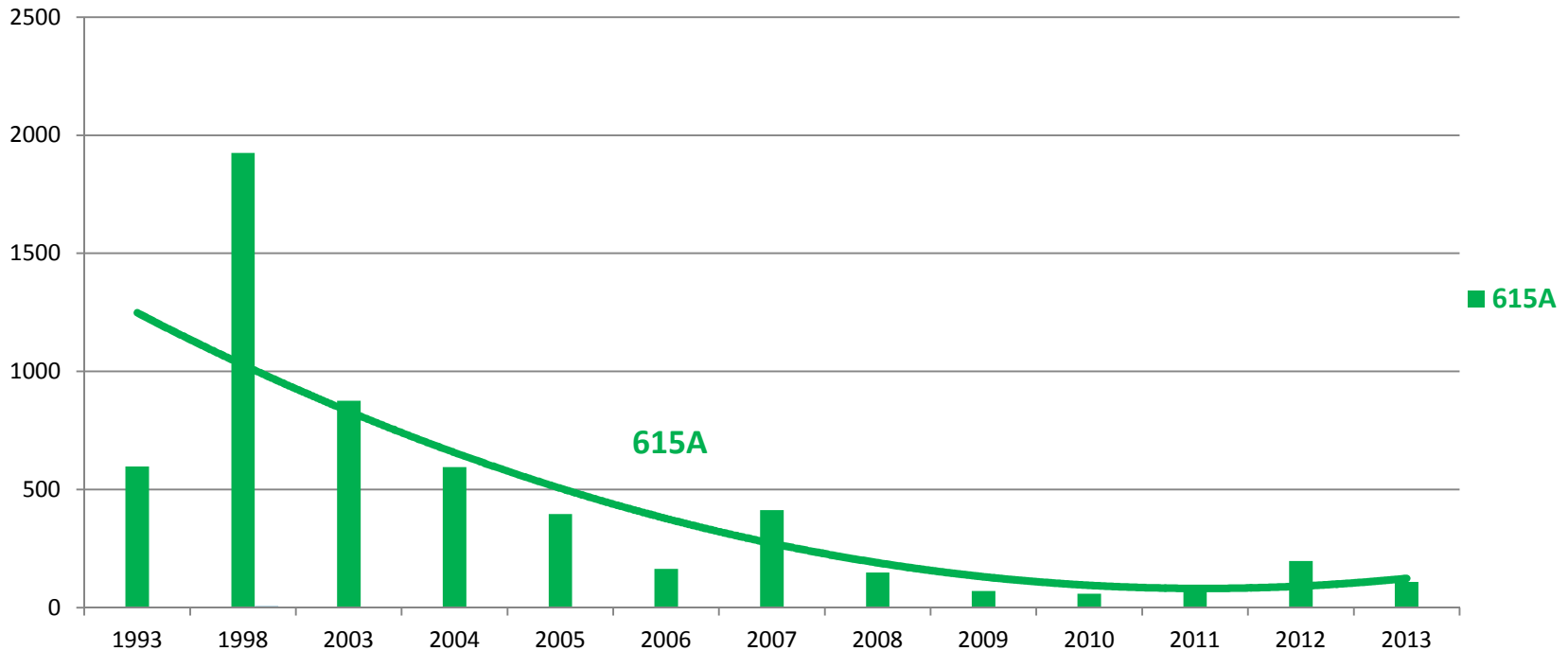
- Medium stock sizes remain the most ordered stock by customers.
- 411B's have steadily increased since 2004.
- 410's increased until 2007 and have been decreasing in use since that time.
- 412B's have steadily increased since 2003.
- 415B's have dropped off the chart since 2007.

Trends by Sowing Year - Large



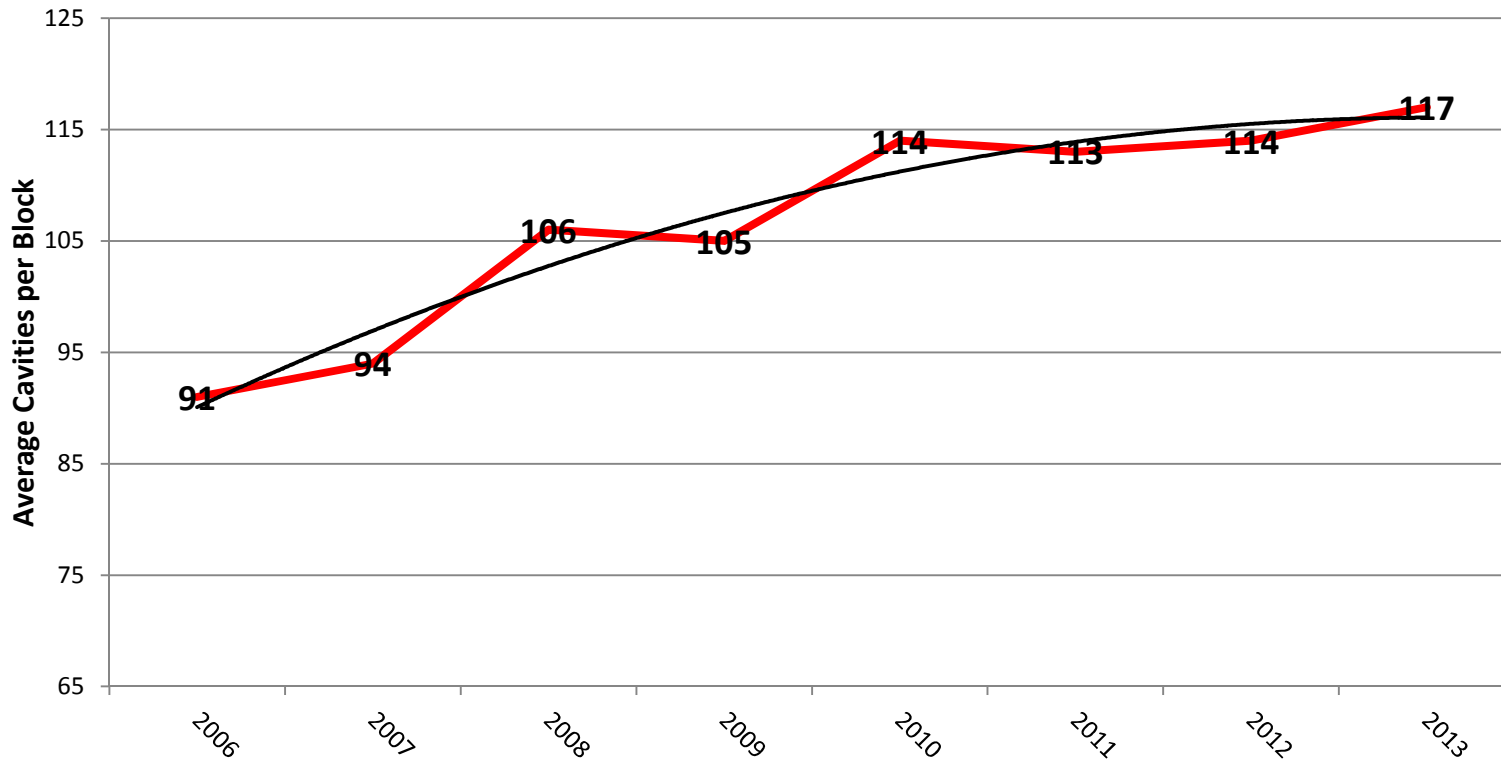
- 412A – started decreasing trend in 2008 (replaced by 412B?).
- All other large stock types have seen decreasing use.

Trends by Sowing Year - Jumbo



- Jumbo stock use has also fallen off.
- 615A 's are by far the most used Jumbo stock.

Trends - Stock Size – Cavities per Block (PRT Data Only)

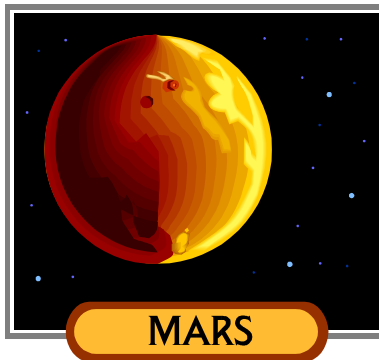


- Increasing Number of Cavities Per Block Since 2006.
- **28.6%** Change from 2006 to 2013 Contract Years.
- Smaller Stock Size Ordering – Impacts of 309 / 411B Substitutions and Global Financial Crisis.

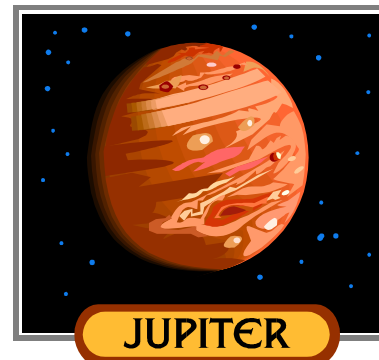
Other Interesting Trends

Public vs.. Private Sectors

Different Planets?



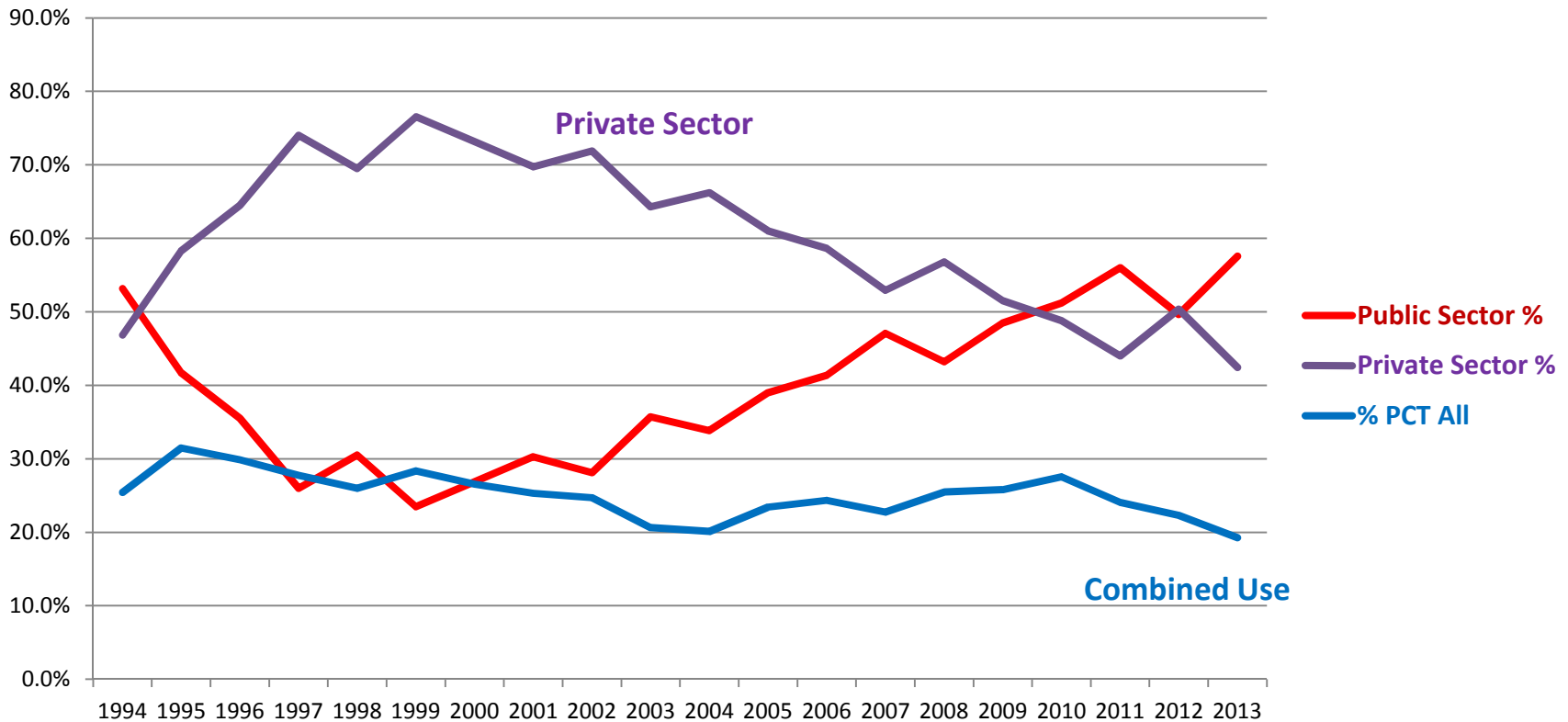
Public Sector



Private Sector

Trends - PCT Use

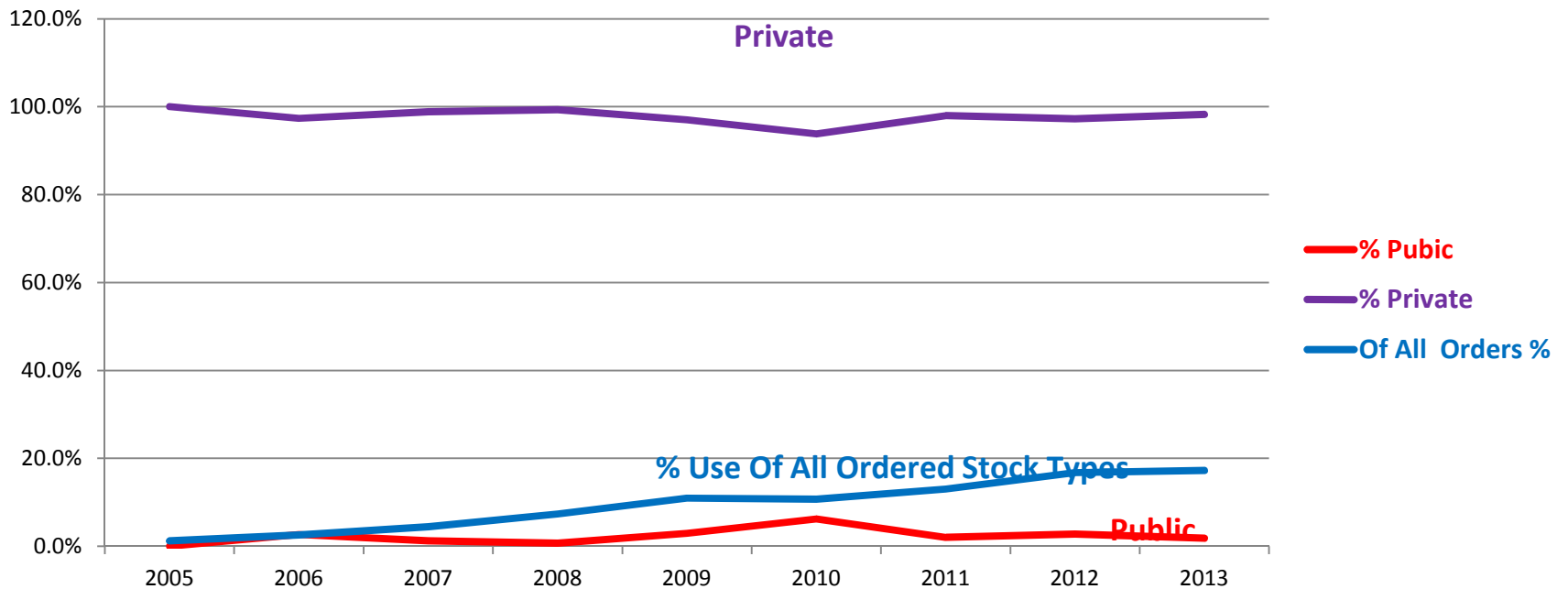
Public vs.. Private Sector



- Private Sector – Reducing Use.
- Public Sector – Increasing Use.
- Combined Overall – Decreasing Use.

Trends – 411B

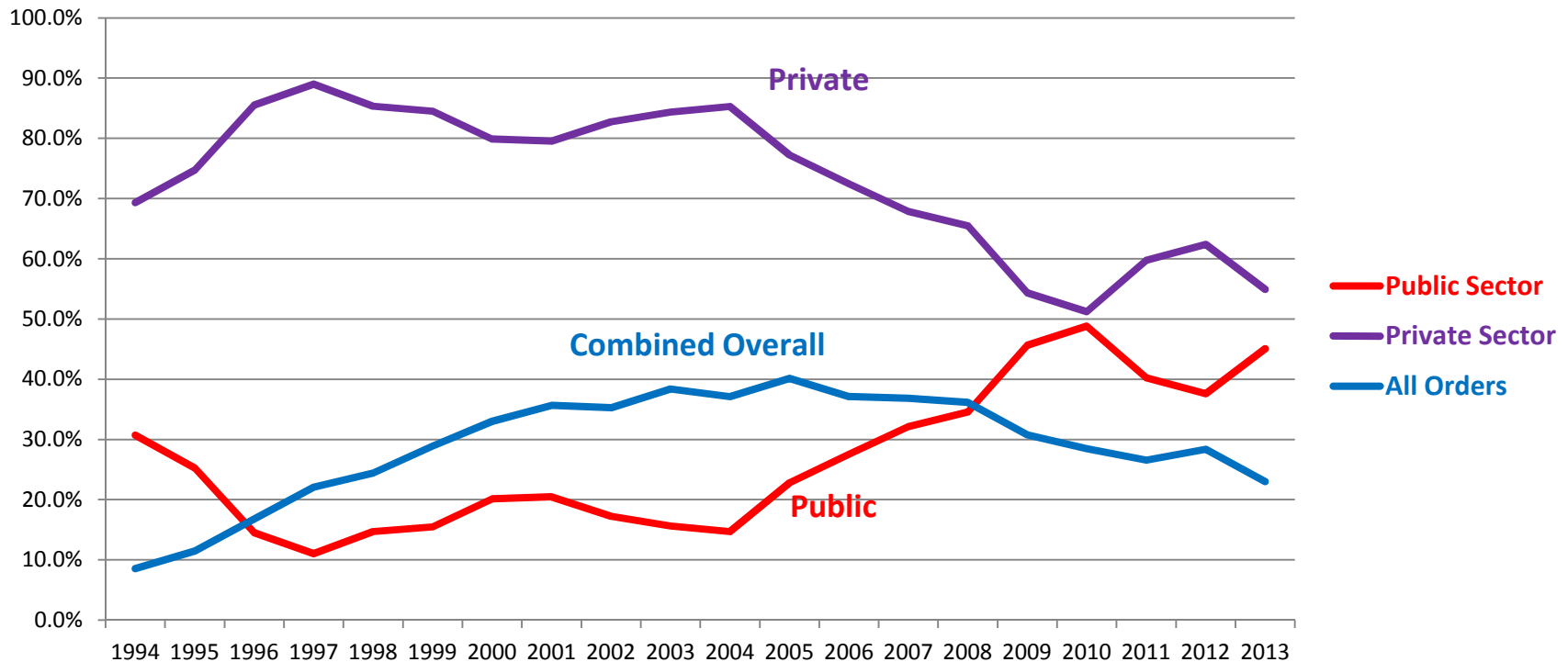
Public vs. Private Sector



- Private Sector – Year Over Year Increases in Use.
- Public Sector – Very Limited Use.
- Combined Overall – Increasing Use.

Trends – 410

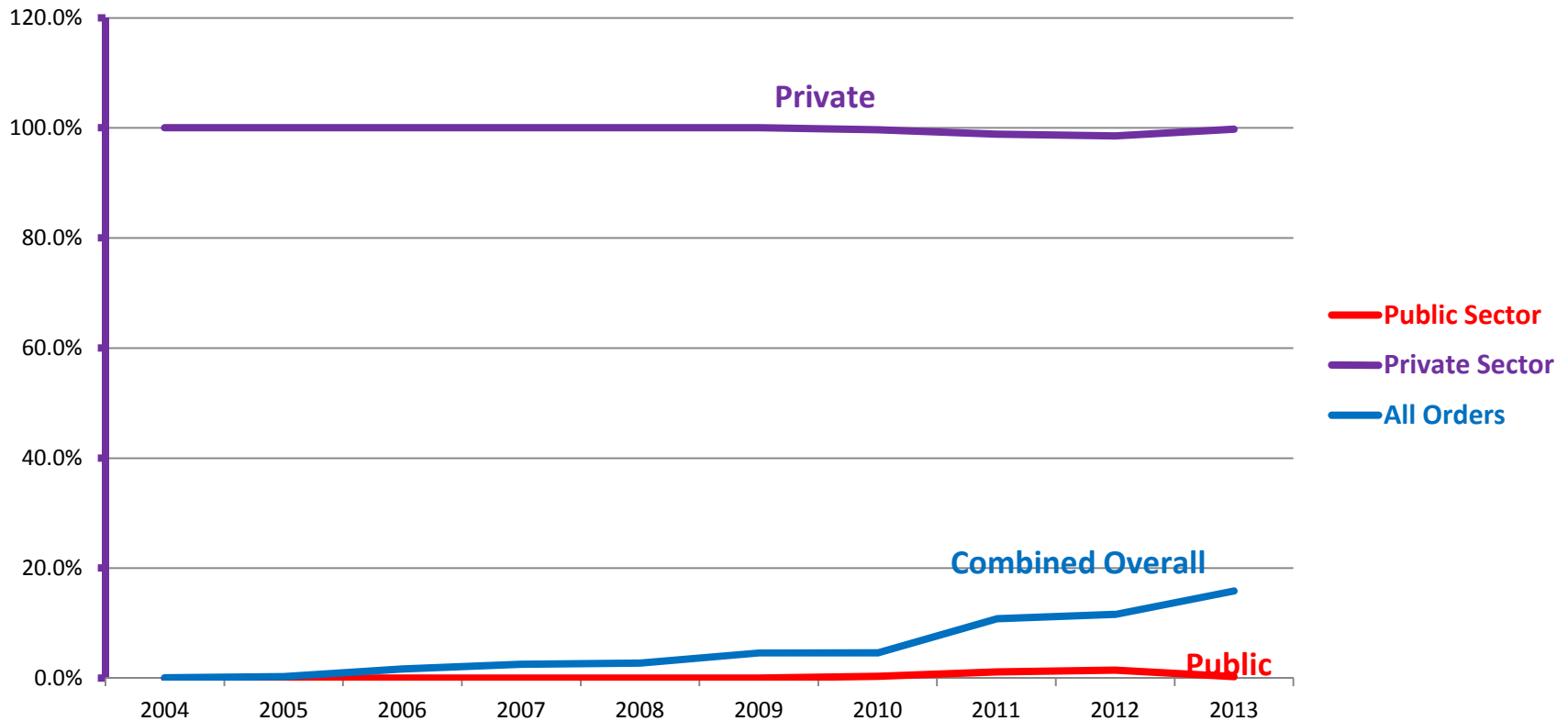
Public vs. Private Sector



- Private Sector – Decreasing Use.
- Public Sector – Increasing Use.
- Combined Overall – Decreasing Use.

Trends – 309

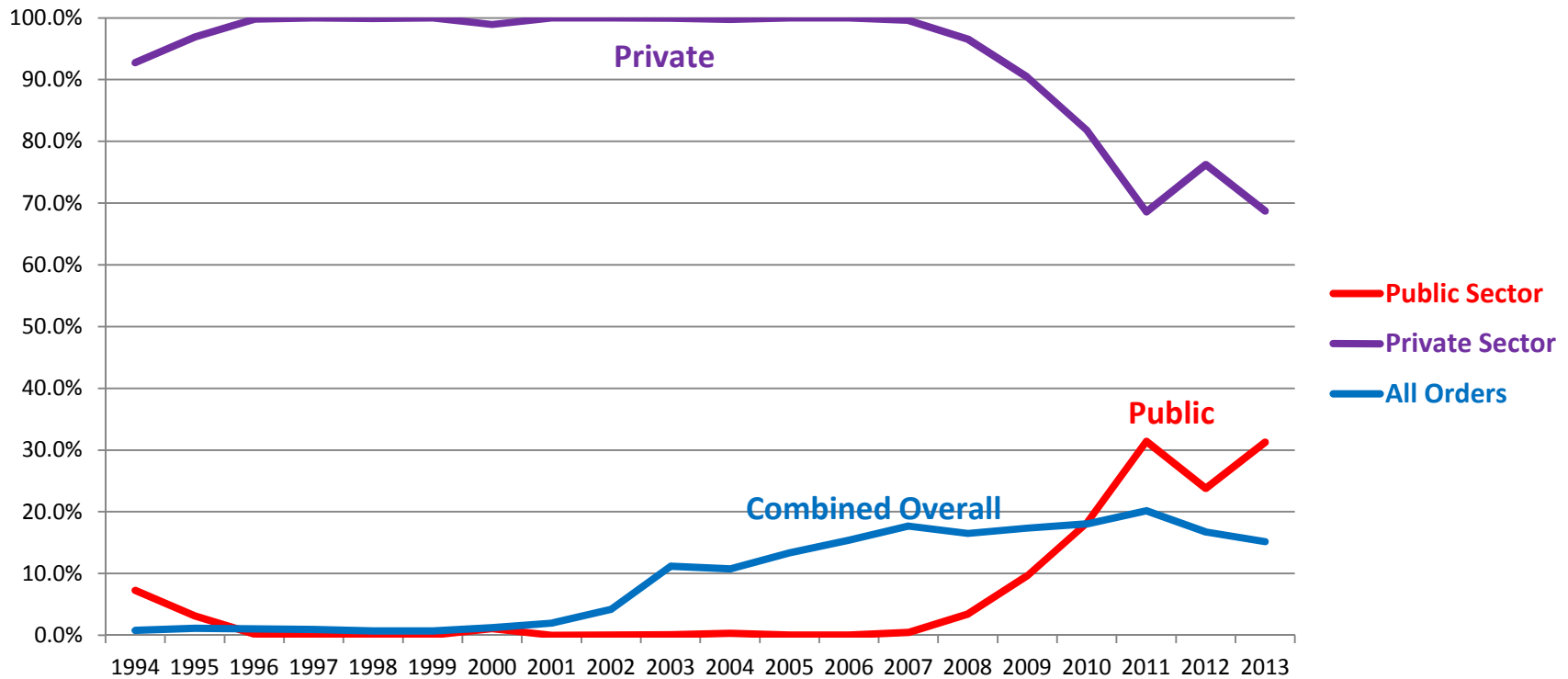
Public vs. Private Sector



- Private Sector – Increasing Use.
- Public Sector – Decreasing Use.
- Combined Overall – Increasing Use.

Trends – 310B

Public vs. Private Sector



- Private Sector – Decreasing Use.
- Public Sector – Increasing Use.
- Combined overall – Decreasing Use.

Potential Future Trends

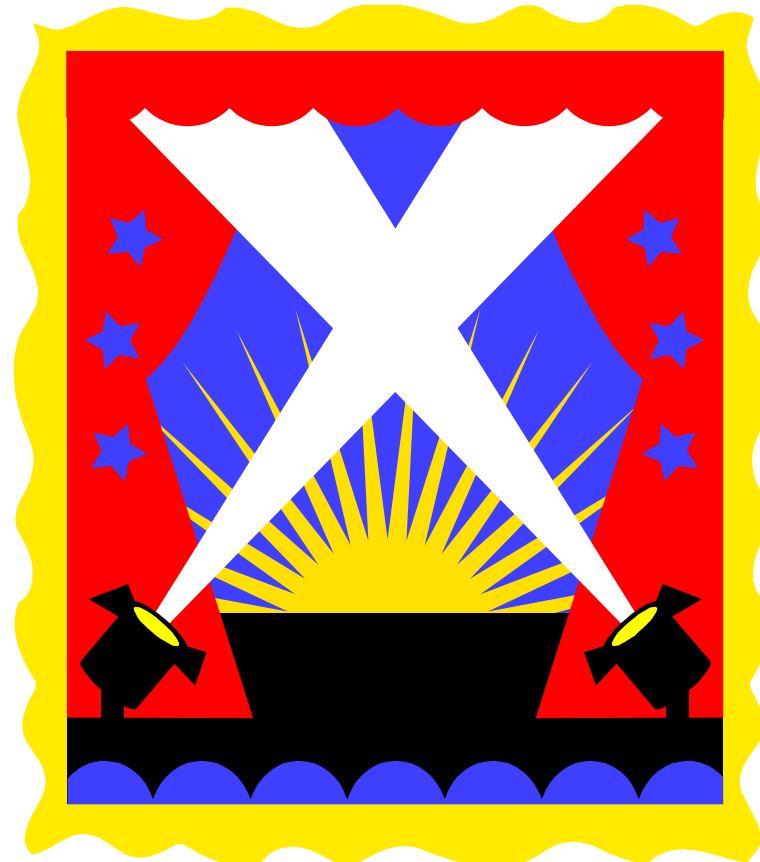
- 1. Species shift to more Green House requiring crops;**
 - Harvesting moves out of MBP stands and into other timber supply areas;
 - IDF, high elevation, mixed species stands.
- 2. Return to higher density planting and less risk taking;**
 - Recession caused increased risk taking in;
 - The stems per ha being planted.
 - Increased reliance on natural regeneration.
- 3. Return to larger stock size ordering;**
 - Relieved financial pressures may = less risk taking by customers.
 - Expect the average number of cavities per block ordered has peaked and will start to decrease.

What Does This All Mean

- Customer stock type preferences change over time with;
 - Wood profile available.
 - Changes in customer staffing.
 - Customer culture and experience.
 - Economics of the industry.
 - The challenges of the planting site.
 - Innovations in the industry.
- None of these changes tend to happen in unison across the whole industry at a single time. The result is a high degree of complexity at the nursery level.

There is A Better Way!

Stock Type Simplification!



Small, Medium and Large Stock Types (Not Elephants)



The Advantages of Stock Type Simplification

The Nursery Perspective:

- Standardization of stock sizes would greatly simplify nursery operations and improve economies of scale (productivity).
- Greater control on growing regimes - common stock types can have similar growing cultures.
 - Fewer request keys and seedlots to manage.
 - Fewer stock types, less complexity = increased amount of grower time that can be dedicated to growing customer orders.
- Potential to reduce both nursery oversows and customer seed use thereby saving customers money.
- Potential to increase both customer stock quality and meet customer requested seedling volumes (reliability).
- Improved control of styroblock inventory.

The Advantages of Stock Type Simplification

The Customer Perspective:

- Planting program simplification – from ordering through to planting.
 - Streamlined planning and budgeting (accuracy).
 - Decreased number of request keys required to execute planting program.
 - Increased flexibility in moving stock around before and during planting program.
 - Simplification = reduced opportunity for error at every point in the supply chain.
- Reduced complexity = cost saving in both seed use and seedling cost (oversow reductions).
- Improved reliability and stock quality from the nursery.

The Challenges of Stock Type Simplification

- Changing mind sets.
- Achieving customer consensus on what are a Small, Medium and Large stock size.
- The standardization of stock size categories needs to be the same within regions (Coast, Southern Interior, Northern Interior) in order to get the full benefit.
- Staying the course once standardization is achieved.

Special Thanks to Susan Zedel for
extracting the data from SPAR for
this presentation.

Your Awesome!

Thank You.