

Tall spindle – how did I get here?

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UMass
Extension



International Fruit Tree Association

- Annual Conference
- February 26 – March 4, 2011
- Pasco,
Washington
- “Where fruit tree
professionals grow”
- ifruittree.org



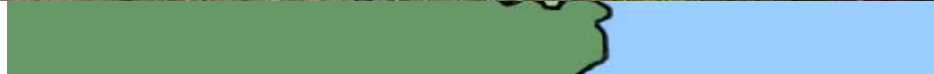
2001 - Europe

- IDFTA (now IFTA) study tour to France, Germany, Italy
- France most traditional
- Switzerland (organic)
- Germany – home of super-spindle
- Italy – 1 X 3 trees, aka tall-spindle
- Take home?
 - Europe is way ahead of us...



2001-France

Loire Valley



France

tree spacing was variable



France

hail nets were commonplace



2001 - Switzerland

organic seemed to be popular



Switzerland

organic research and varieties



Switzerland

tidy research orchard, home of Arlet



2001 - Germany

Lake Constance (Bodensee)



Germany

birthplace of super-spindle



Germany organic super-spindle



2001 – Italy

South Tyrol



Italy

Dolomites



Italy

very large patchwork of small orchards



Italy

Golden Delicious predominant



Italy

1 X 3 meters was the norm



Italy

results in fruiting wall



Italy

My 'eureka!' moment?



Italy

“this is the way to grow apples!”



2002 – British Columbia

- IDFTA Annual Meeting, Kelowna, BC
- Growers paid to re-plant
- Super-spindle
- 2 ft X 10 ft
- Fruiting on spurs born on ‘spindle’
- Renewal pruning



British Columbia all about the super-spindle



British Columbia all about the super-spindle



super-spindle
this is the only ladder you need



super-spindle

renewal pruning cuts, spur pruning



super-spindle
“I think I like it!”



Spring 2002

- The super-spindle comes to Massachusetts
- 0.5 acre, 800 trees, 2 ft x 12 ft
- M.9, B.9, and G.16 rootstocks
- 10+ varieties (Honeycrisp, McIntosh, Cortland, Cameo, Gala, Fuji, Goldrush, etc.)



MA super-spindle

2nd leaf Redmax McIntosh/Bud9



MA super-spindle

2nd leaf Honeycrisp/Bud 9



MA super-spindle Brookfield Gala/M.9



MA super-spindle

4th leaf Cameo/Bud9 bloom



MA super-spindle

2010 Cortland/M9



MA super-spindle

2010 Autumn Rose Fuji/Bud9



MA super-spindle

2010 Mutsu/M9



MA super-spindle

2010 Braeburn/Bud9



MA super-spindle

it's not all good!



2003 – Back to BC

very good fruit growers



2003 – British Columbia somewhere between SS and TS



2003 – British Columbia somewhere between SS and TS



2003 – British Columbia spacing depends on variety



2003 – British Columbia spacing depends on variety



2004 - Italy

- Back to Italy, IDFTA Annual Conference, Bolzano
- A real lesson in 1 X 3 apples...



We are here!



Italy - 2004

young tall-spindle



Italy

'old' tall-spindle



Italy
no heading of leader!



But, attempts to control top growth NAA paint

Results published in Fruit Notes (umassfruit.com)



Italy

hail netting a must



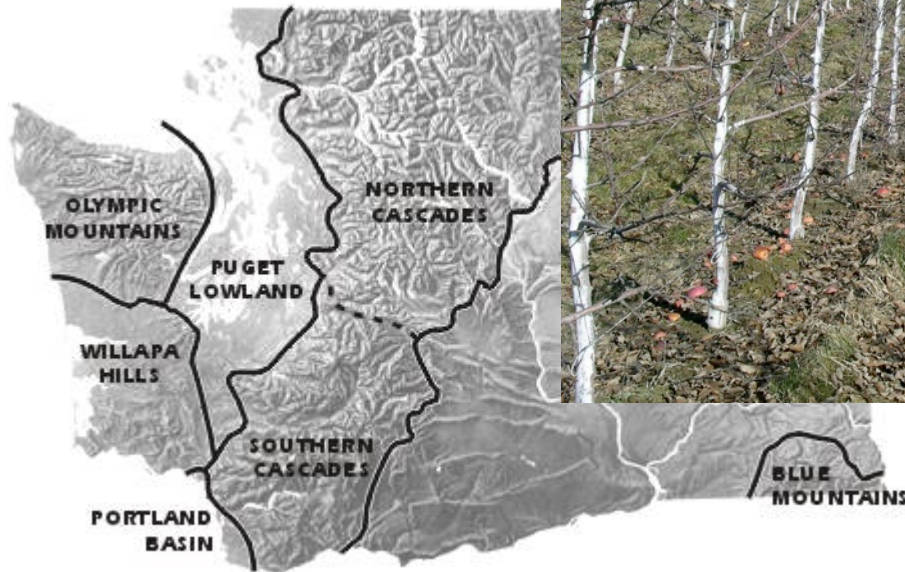
Italy

‘knip-boom’ apple tree



2005 – Washington state

- Columbia Basin
- They are trying...



Washington

typical 'tall-spindle' planting

BROOKFIELD GALA

M9 at 3'9" x 12'

Planted 1999

42 Bins/Acre in 2004

Washington typical 'tall-spindle' planting



Washington Auvil 'factory' orchard



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2006 Massachusetts

- Mini-apple orchard systems trial
- UMass Cold Spring Orchard, Belchertown, MA
- 3 rootstock/
system
combinations
with McIntosh
and
Honeycrisp



2010 McIntosh/MM.106



2010 McIntosh/M.26



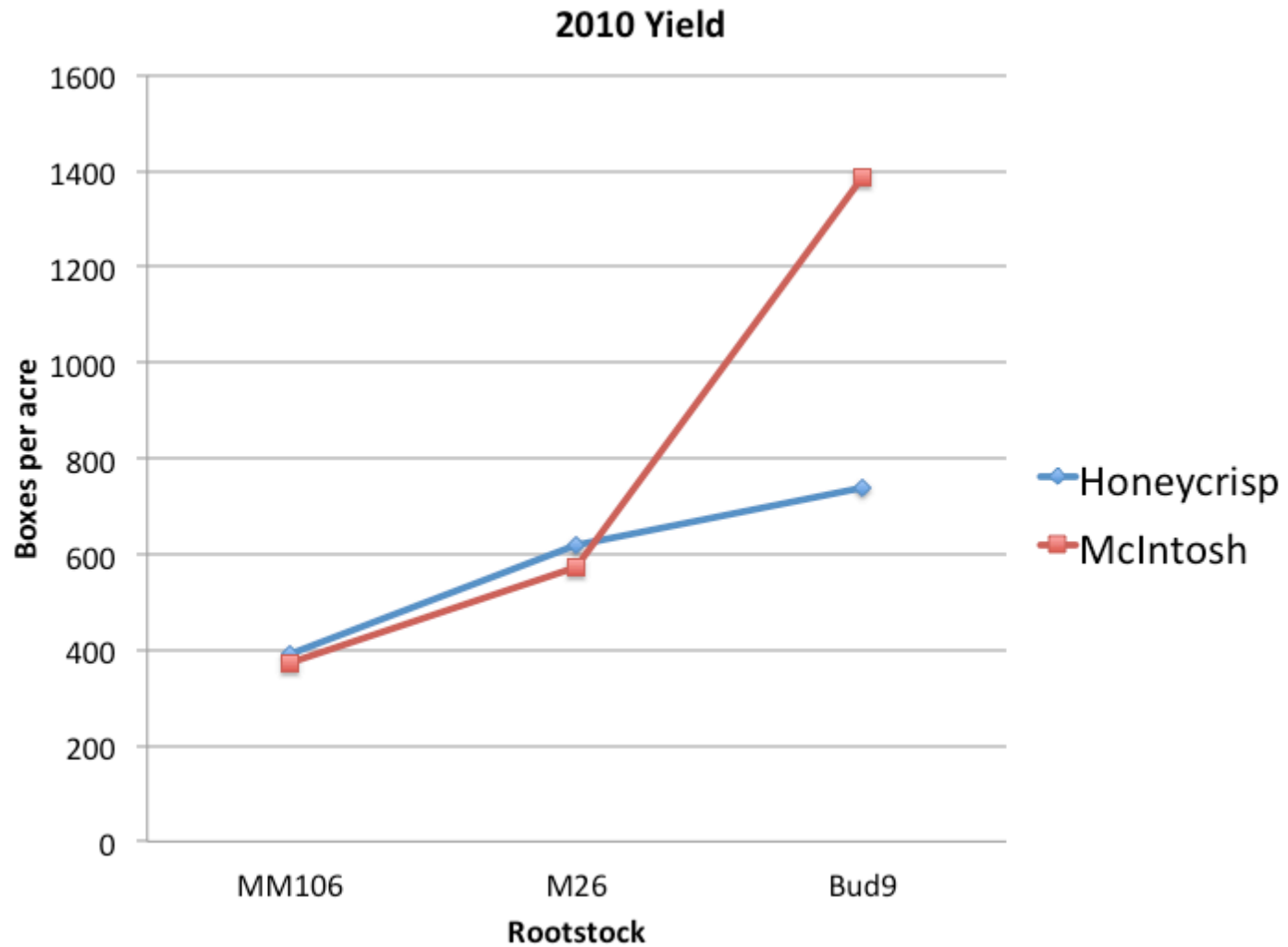
2010 McIntosh/Bud.9



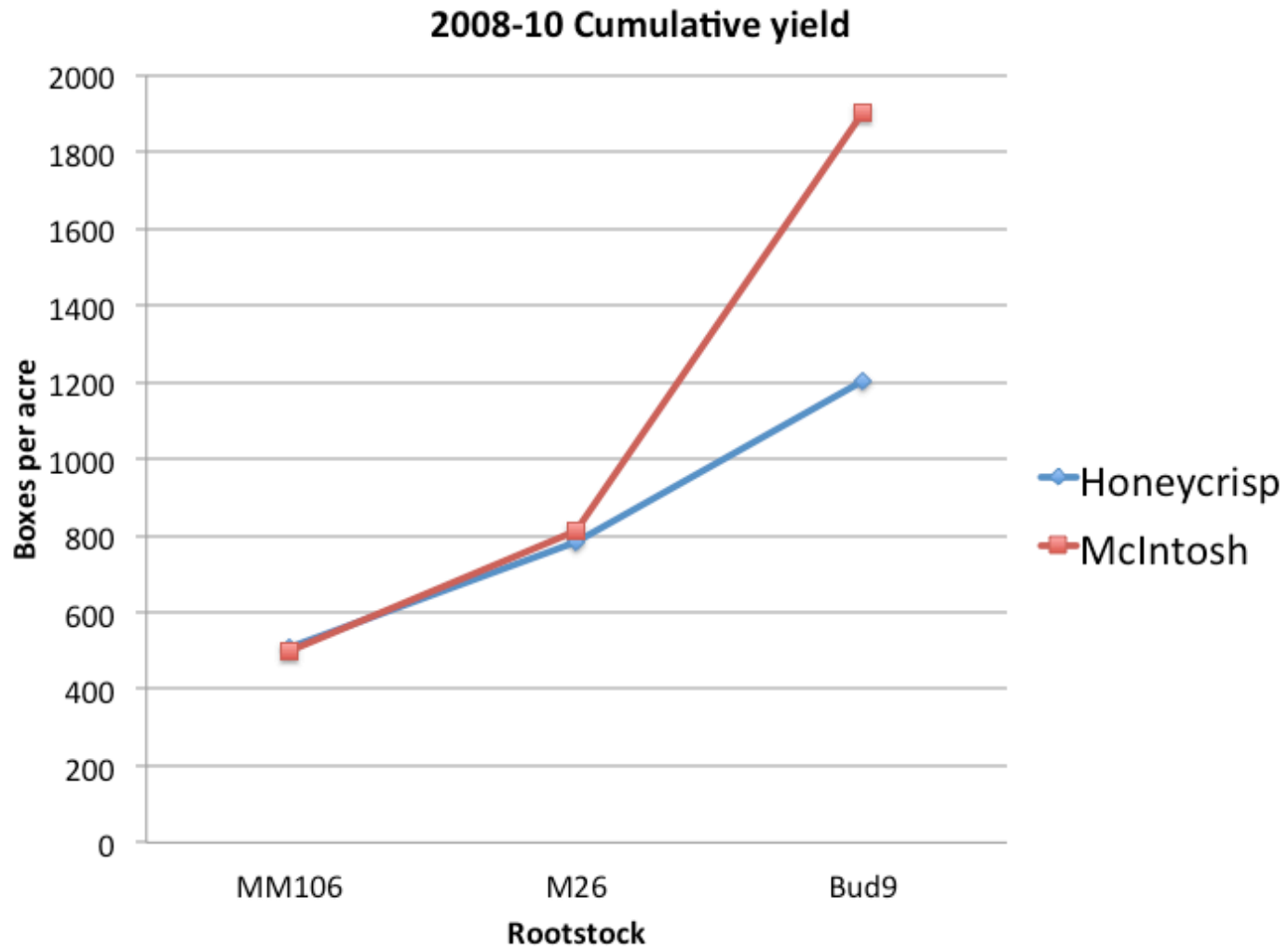
2010 Honeycrisp/Bud.9



Results



Results



High-quality fruit!



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2009 – Nova Scotia

- IFTA 'Summer' Tour to Nova Scotia
- Making the transition from processing to fresh
- Incentive to plant tall-spindle and get into production fast:
 - Honeycrisp
 - SweetTango™



Nova Scotia semi-hi density



Nova Scotia tall-spindle Honeycrisp



Nova Scotia ?



Nova Scotia ?



Nova Scotia SweeTango™



2010 – New York

- IFTA 'Summer' Tour to western New York
- Tall-spindle was 'on-display'
- Western New York orchards ARE being planted to tall-spindle
- Technology is following suit



2010 western New York young tall-spindle



2010 western New York tall-spindle McIntosh



2010 western New York mechanization with platform



2008-2009 let's go back to Mass...

- MOPUP – Massachusetts Orchard Production Upgrade Program
- 10 orchards
- One acre, 1,000 trees per orchard
- All planted 3 ft. X 12 ft.
- Mac, Cortland, Macoun, Honeycrisp, Gala, Fuji, Golden Delicious

2009 planting



Decent nursery trees



2008 planting, 2009 flowers



2nd leaf Honeycrisp

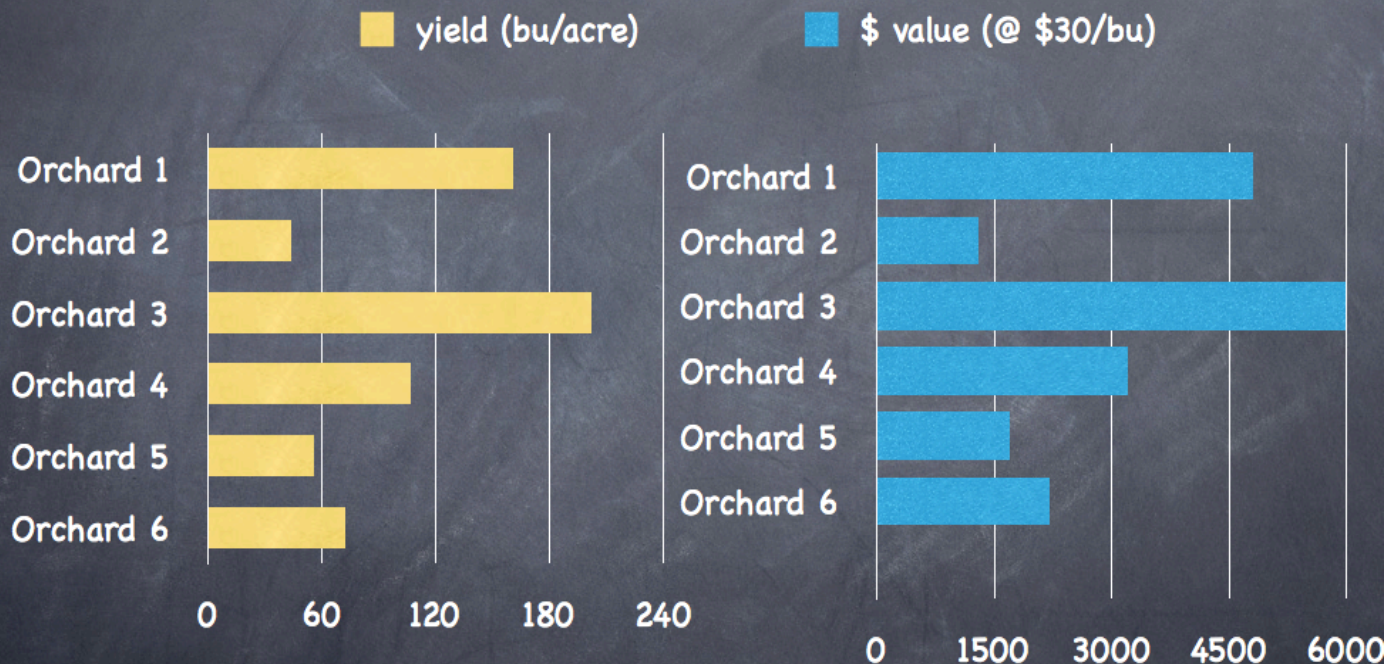


2nd leaf Gala



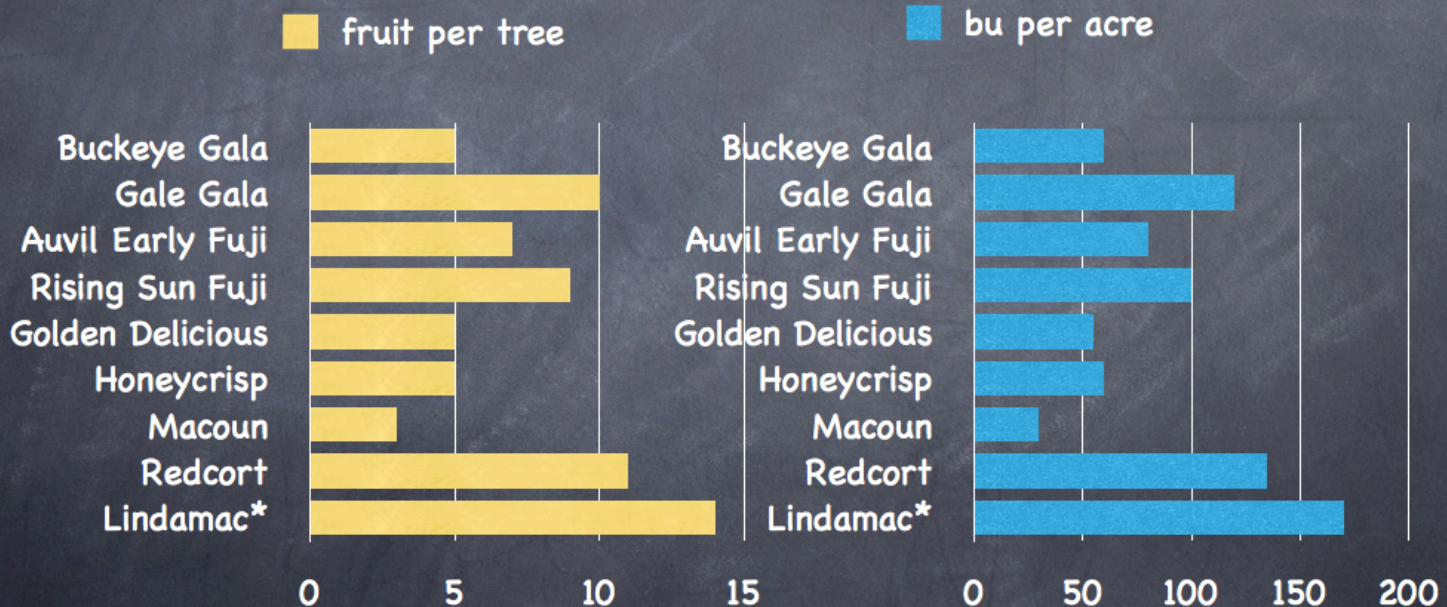
MA MOPUP orchards

estimated 2nd leaf yields



MA MOPUP Orchards

by variety (one orchard)
2nd leaf fruit yield



Tall-spindle = happy grower



What's next?

- Order trees ahead
- Plant an acre
- See if it is right for you
- tallspindleapple.com
- Good luck!

