

# Deployment of Improved Seed



# Improved Seed – What is It?

- Wild parents are selected for desirable traits – faster growth, wood quality and pest resistance.
- The offspring of these parents are tested to determine if the traits are heritable.
- Copies of the “best” parents are grafted onto root stock and planted in seed orchards.

# Sources of Improved Seed

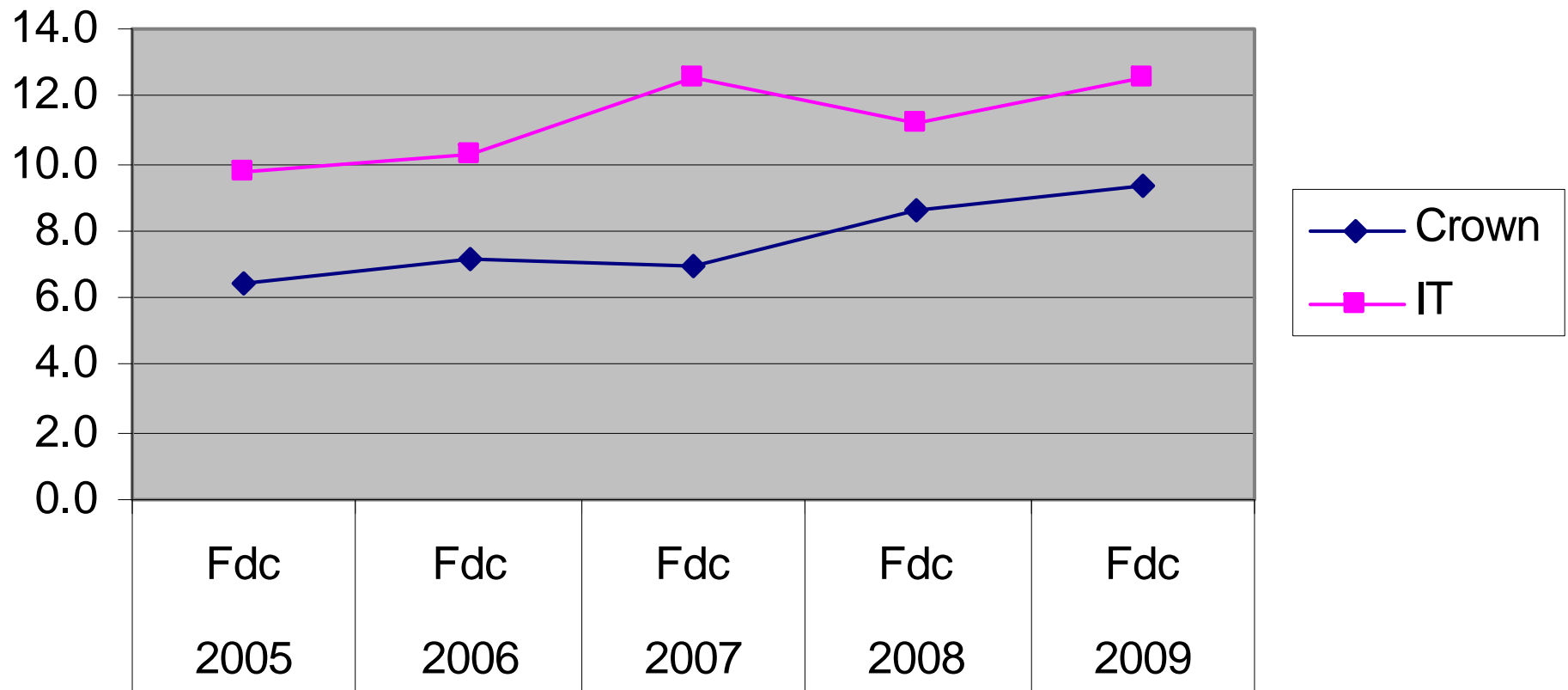




# CHIEF FORESTER'S STANDARDS FOR SEED USE

- “For the purpose of establishing a stand... a person must select a registered lot,... **that, at the time of selection, has a genetic worth of 5 per cent or greater...**”

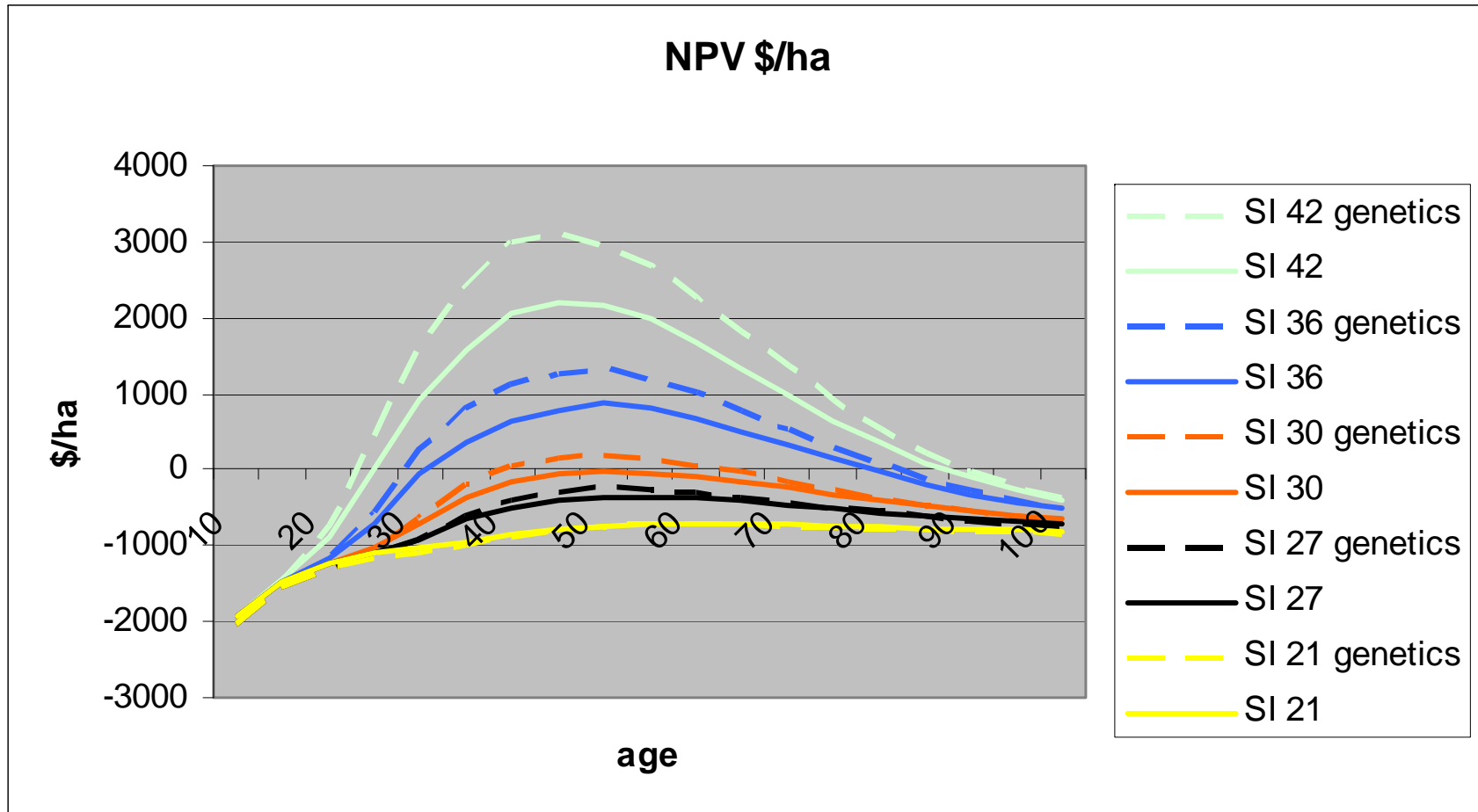
## Fdc Average Gain



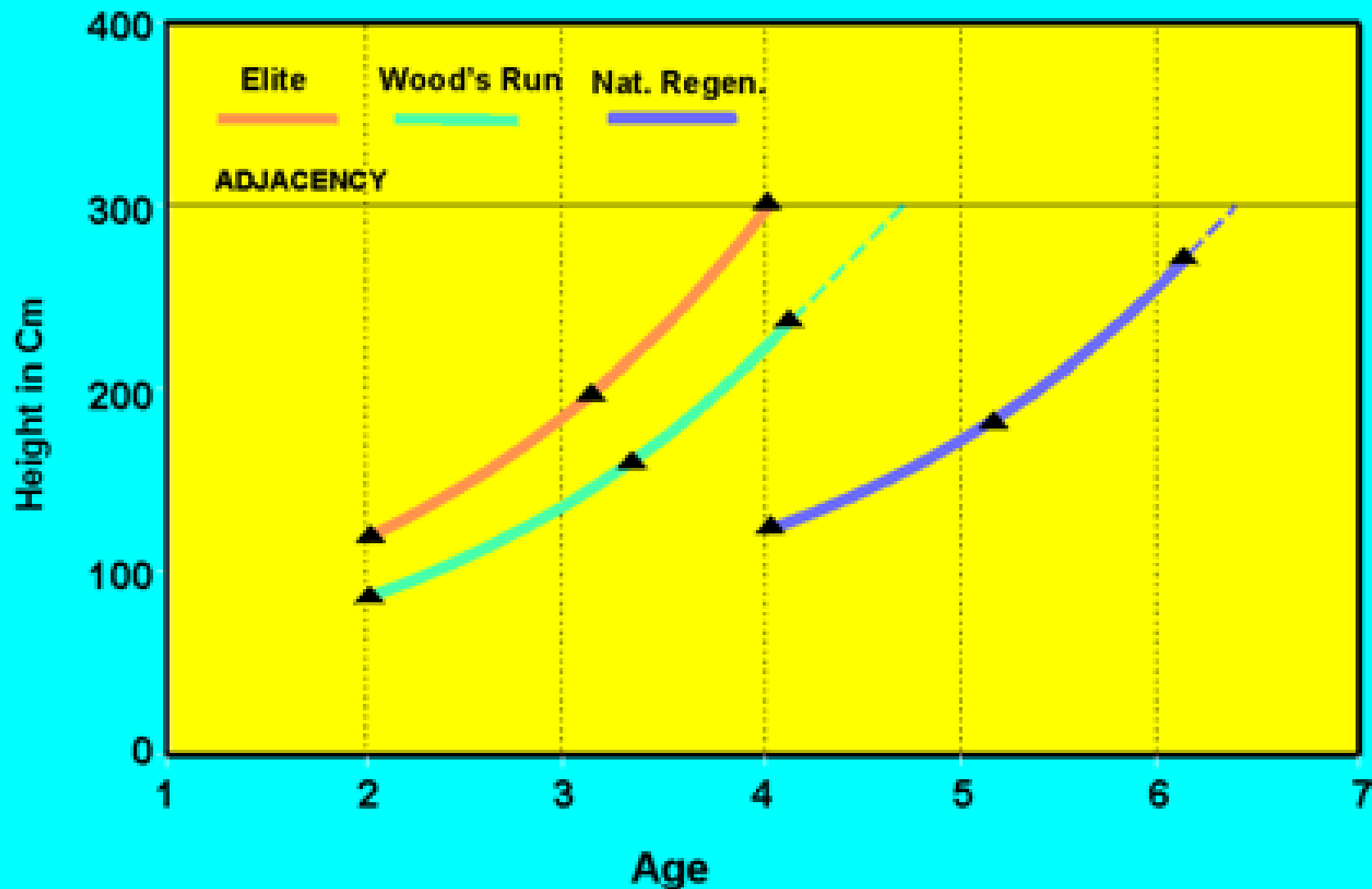
# Advantages of Improved Seed

- Increased Net Present Value
- Expediated Adjacency
- Earlier Free Growing
- Reduced Brushing Costs
- Known Parental Diversity
- Density and Species Control
- Allows the use of smaller stock sizes

- Improvement in NPV with 20% Gain Douglas fir



# Expediated Adjacency Through Improved Stock





Earlier FG  
+ Reduced  
Brushing\$





# Known Parental Diversity





# Density and Species Control





# Use of Smaller Stock Sizes



# Disadvantages

- Cost
- More challenging for nurseries to grow
- Potential for poorer wood quality

# Cost of Improved Seed (cents/seedling)

<b>Species</b>	<b>Wild</b>	<b>15% Gain/R60</b>
<b>Douglas fir</b>	<b>2</b>	<b>8</b>
<b>Red Cedar</b>	<b>0.5</b>	<b>2</b>
<b>Yellow Cedar</b>	<b>4</b>	<b>15</b>
<b>White Pine (R60)</b>	<b>5</b>	<b>15</b>



# More Challenging for Nurseries





# Potential for Poorer Wood Quality



# Genetic Gain Availability

	Current (%)	Future (%)
Red Cedar	5-15	20+
Yellow Cedar	15-20	20+
Douglas fir	7-17	20+
Western Hemlock	15	15
White Pine	R25-60	R70?
Sitka Spruce	R90	R90
Red Alder	14	25+

# Guidelines for Allocating Douglas fir

<b>Genetic Gain</b>	<b>Site Index</b>
<b>0-5%</b>	<b>15 to 23</b>
<b>6-10%</b>	<b>24 to 27</b>
<b>11-15%</b>	<b>28 to 35</b>
<b>16+%</b>	<b>36 +</b>

# Single Family Deployment



# Questions

