

Machinery Ownership and Leasing

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MAST Program
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Purpose of module

- Develop an understanding of the costs associated with owning and operating machinery
- Trying to reduce decisions to numbers
 - Custom hire
 - Own vs. rent
 - Lease vs. purchase
 - Trading strategies
- ... targeting the decision tools:
 - *OwnBaler.xls*
 - *OwnCombine.xls*
 - *OwnSprayer.xls*
 - *OwnTractor.xls*
 - *KSU-MachCost.xls*
 - *KSU-GPSguidance.xls*

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Module:
Machinery Ownership and Leasing

Session:
Machinery trading strategies

This session:

- Machinery trading strategies for tractors and combines
 - Trade frequency
 - Age of combine purchased (new vs. used)
 - Usage rate
 - Income tax issues

- Analysis based on *OwnTractor.xls* and *OwnCombine.xls*

Tractor simulation assumptions

- Built valuation models from Blue Book data
- All based on Resale Cash Price (not trade premium)
 - Since repair formulas assume tractors are “kept up”
 - Buy and sell at this market price
 - Assume old tractor is sold and new is purchased outright
- 15.3% SE tax is on top of the stated IRS/state rate
- Report cost as \$/hour to compare with rental rates
- 7.5% interest, 7-year MACRS

- Considering a tractor “like” a JD 8430 MFWD 250hp
 - The model predicts the new tractor to cost \$161,981
 - Has pto and 3 pt hitch and power shift 16/4

- No consideration of timeliness

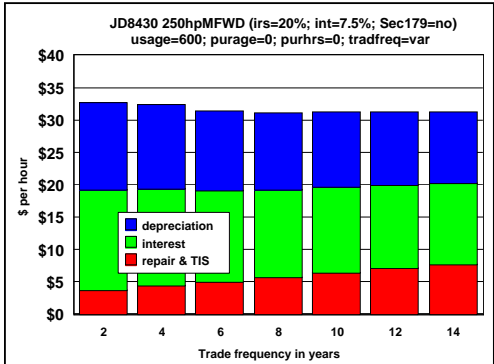
Income tax is a big thing

- Section 179
 - \$250,000 in 2008 (\$128,000+COLA in 2009)
 - Trading strategies analyses assume deduction is \$128,000 whenever it is used

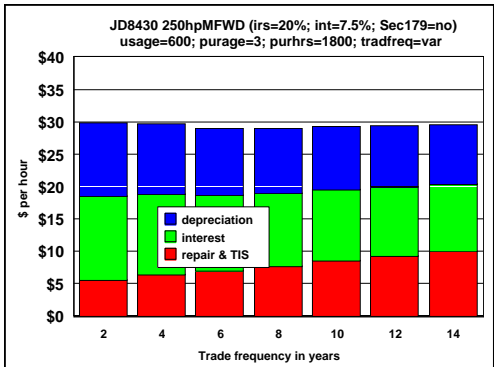
- 50% bonus depreciation in purchase year but this ended with 2004

7 year MACRS factors:

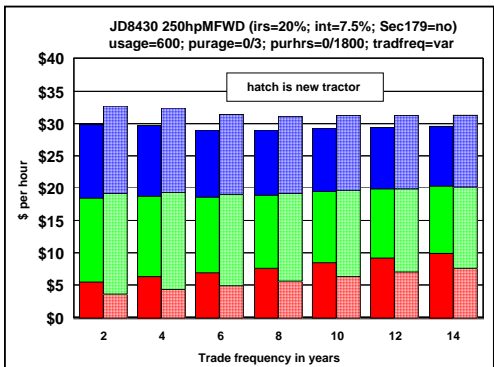
	factor
1 st year	10.71%
2 nd year	19.13%
3 rd year	15.03%
4 th year	12.25%
5 th year	12.25%
6 th year	12.25%
7 th year	12.25%
8 th year	6.13%



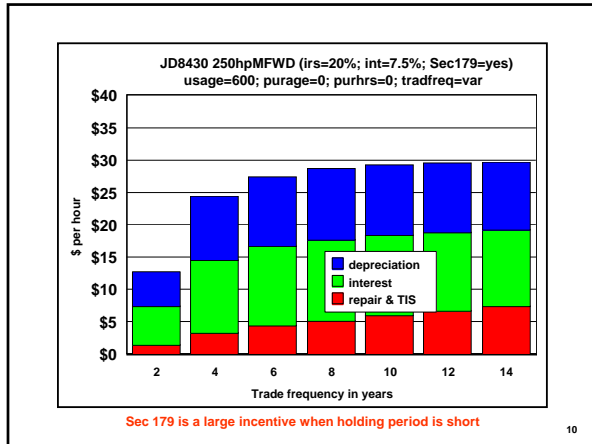
The market is fairly efficient when buy NEW and with a variable holding period 7

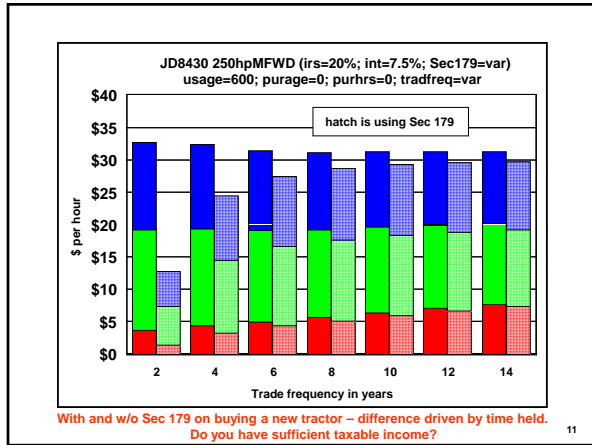


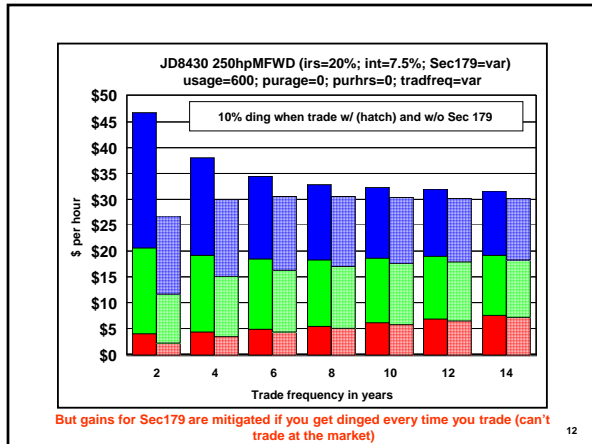
The market is fairly efficient when buy OLD and with a variable holding period 8

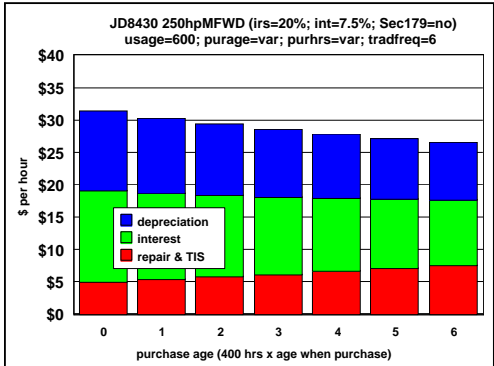


Showing new vs. used strategies 9

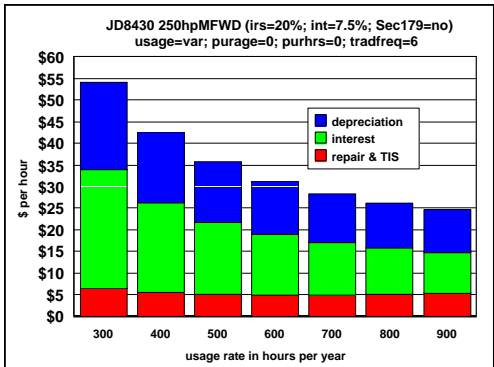




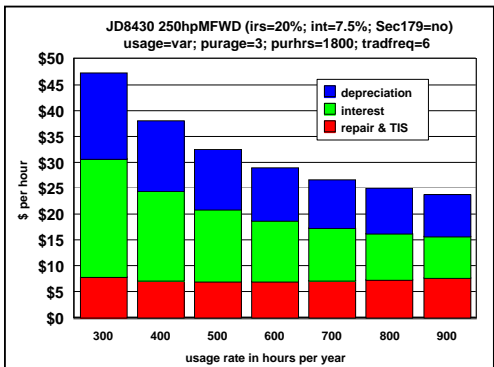




Buying older tractors can be advantageous if it fits your management style



Not a trading strategy, but putting more hours on per year really pays off

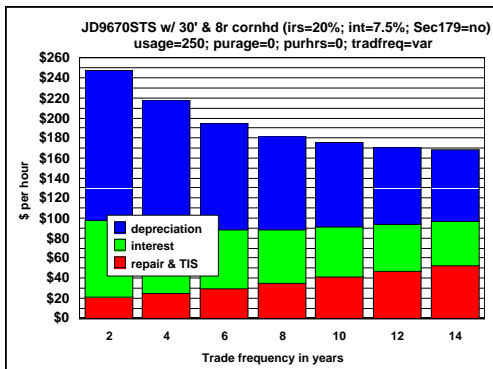


Buying slightly used won't compensate for not putting on enough hours

Combine simulation assumptions

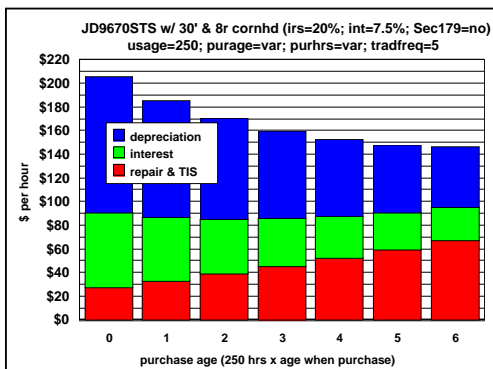
- Combine is a JD 9670STS conventional with a 30' rigid grain platform and an 8-row cornhead
 - Based on separator hours, not engine hours
 - Separator hours are about 70% of engine hours
 - The model predicts the new combine to cost \$285,894
 - Not too far from what custom cutters would be paying
 - Has chopper, chaff spreader, and large engine

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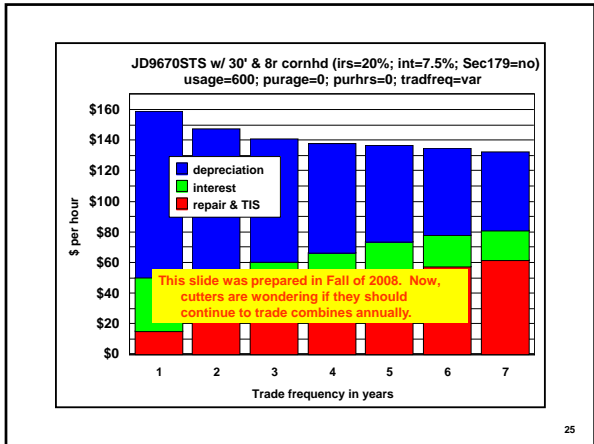
The market appears fairly efficient for longer holding period; don't want to trade too often if only 250 hrs/yr; repairs mount

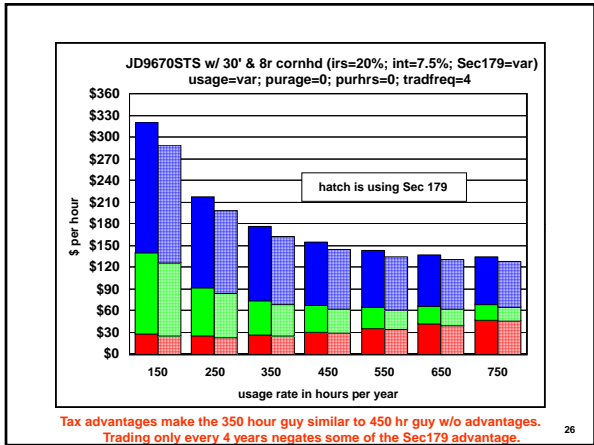
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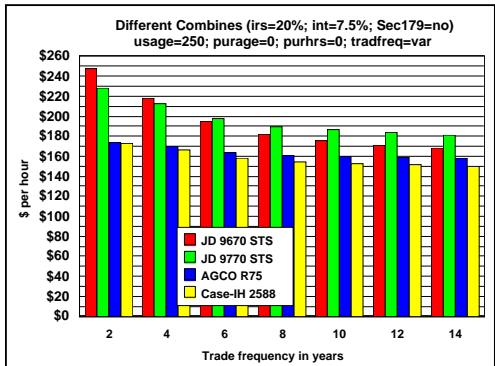
The market appears fairly efficient for purchase age if don't buy too new; repairs mount

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- ### Thinking about Sec 179 & Bonus
- \$250,000 Section 179 in 2008; 50% first-yr bonus on new
 - Take section 179 first, then bonus, then regular depreciation (but bonus ended in 2004)
 - Do you have sufficient taxable income?
 - Biggest gains come with short holding periods
 - Don't buy everything in one year
 - Section 179 goes away \$1 for \$1 after \$800,000 purchases in 2008 (likely a lot lower in 2009)
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OwnCombine compares combines – but think about capacity and other features. Do the JD combines shown have sufficient capacity increase over the CIH model? 28

End of Session:
Machinery trading strategies
