

# ***Access to Land: Economics of Leasing***

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President Harry Truman  
wanted one-handed  
economists because every  
one that he knew said: “On  
the one hand this, on the  
other hand that.”



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# Introduction

- Land values in VA are driven by non-Ag use
- Farmers will find it difficult to compete with
  - Developers
  - Recreational users
  - Rural lifestylers
- Established farmers & beginning farmers



# Paying for Land w/Farming

- Rockingham County estimated profit per acre = \$70 (Use Value Estimates)
- Given \$70/yr, how much could you pay for land?
- Capitalize profits/ac based on 7.5%

$$\text{Value} = \frac{\text{Net Return}}{\text{Capitalization Rate}}$$

$$\$933 = \frac{\$70}{0.075}$$

- \$933/ac is the price you can pay
- Fair market value is, well more than \$933



# Land and Farming

- Land ownership is not required to farm
- Land control is required to farm
- Longer years of control implies
  - Reduced risk
  - Access to cost-share
  - Credit acquisition
  - Capital investments
  - Outside investors to keep land in farming?



# Leasing

- Objectives?
  - Own land as part of an investment portfolio
  - Operate a profitable farm business
  - Both?
- Land costs comparison
  - Purchase @ \$5,200/ac - financed for 30 years @ 4% plus taxes ~ \$300/ac annual cash flow
  - Lease similar land in VA range \$15 to \$100 (NASS)
  - Opportunity of that investment  $\$5,200/\$40 = 130$  acres of additional cropland



# Why own?

- Ownership – It's my farm!
- Collateral – access to financing
- My farm – I can grow and do what I want – total control
- Builds value over time – equity
- Inversely related to stocks?
- Hedge against inflation

# Why not own?

- Costs \$\$\$\$
- Diverts profits
- Cash flow
- Locked into current land base
- Acreage
- Problems
- Buildings



# Why Lease?

- Lower start up costs (land and structures)
- Start up as part-time
- Can expand as needed
- Known fixed costs
- Greater working capital
- Flexible

# Why not Lease?

- Not my farm
- Uncertainty of control
- Legal issues
- Age of infrastructure
- Limited equity
- Multiple landlords
- Multiple tracts – higher costs?

# Economics of Leasing



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# Objectives

To illustrate

- Basic economic considerations of leasing
  - Understand costs – the key concept
  - “I quit” point
  - Long-term “wants”
  - Short-term “got to have”
- Negotiation range
- Valuation of assets & other inputs



# What are Costs?

# Costs

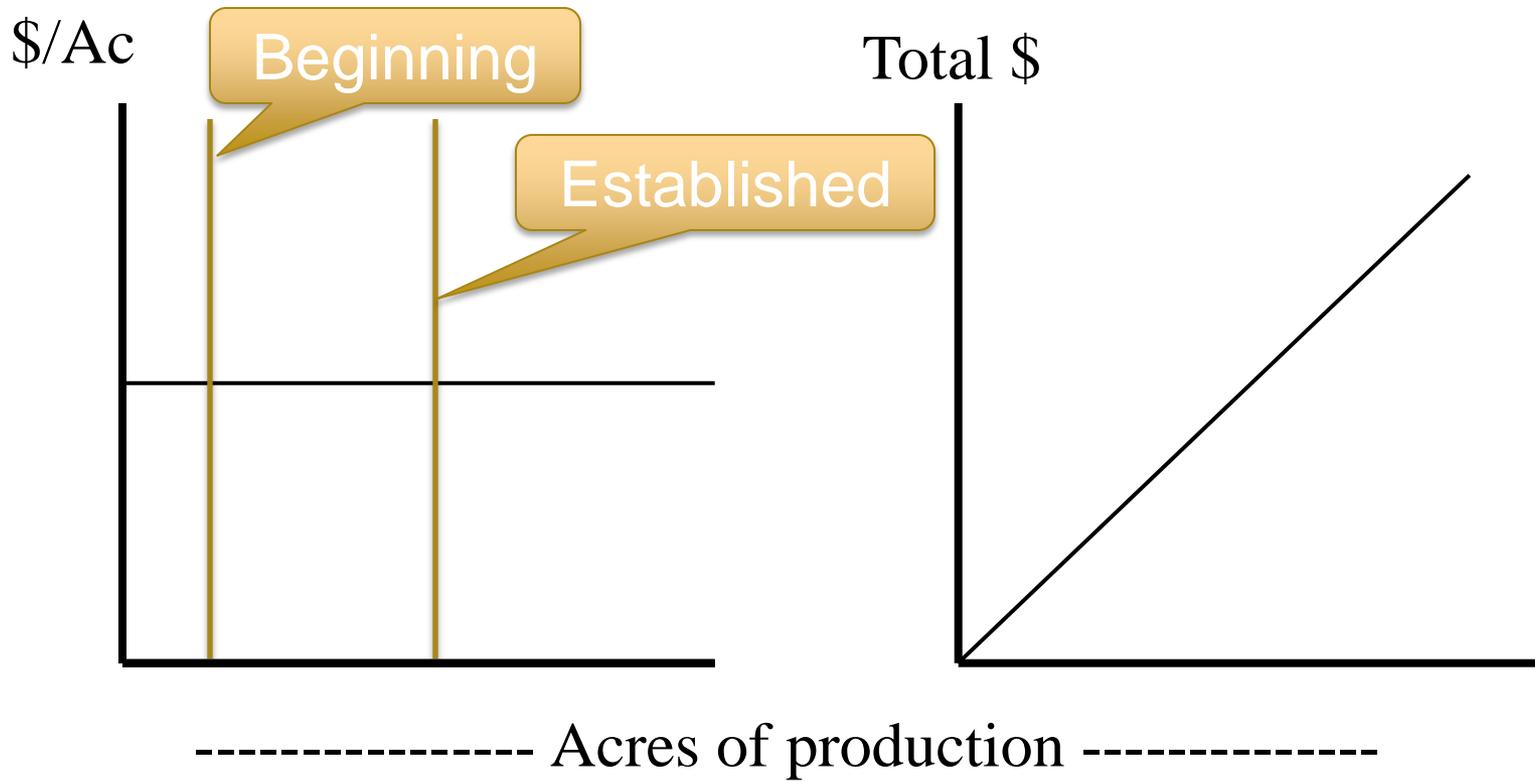
- Opportunity costs
  - Next best use of resources
  - Considering what you are doing now
    - What are you giving up or gaining?
    - Attend child's baseball game?
    - You can always go fishing!
- Variable costs
- Fixed costs



# Variable costs

AKA, operating or out-of-pocket costs  
e.g., fuel, oil, seed, fertilizer...

Change with production

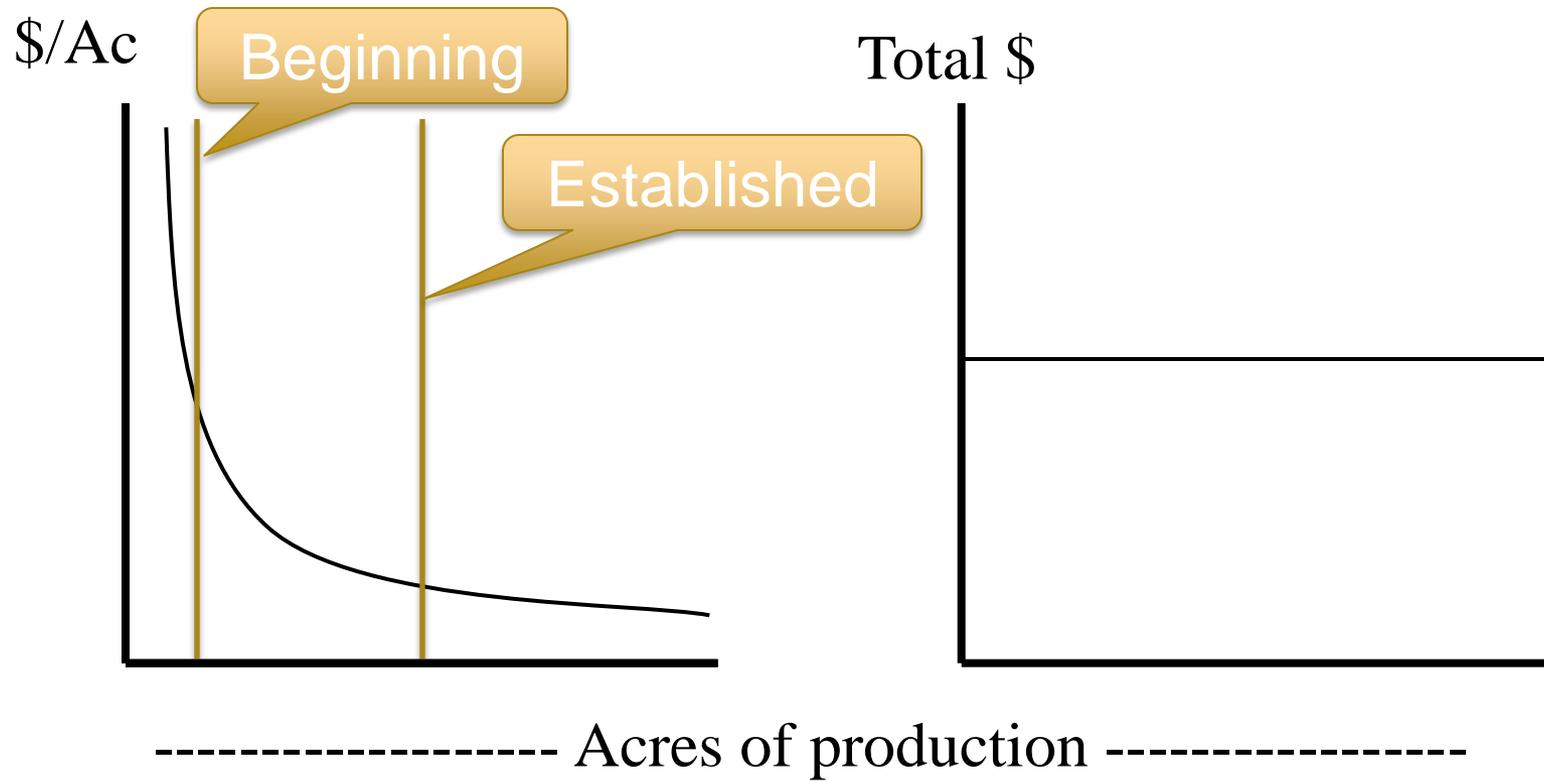


# Fixed costs

AKA Sunk Costs

e.g., depreciation, interest, taxes, insurance...

Do not change with production



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# Leasing Concepts

# “I Quit” Point

- For property owners to lease out land, they must cover all additional variable costs and risk
  - Otherwise they are better off doing nothing
- For farmers to lease land, they must cover all variable costs (and risk) of producing a crop and/or livestock product
  - Otherwise they are better off not leasing



# Consider an Example Farm Lease

## Landlord

- Owns land - 125 acres
- Owns hay shed, fence, & water system
- Good soil fertility & pH
- Wants a fair return

## Tenant

- Owns machinery
- Owns 50 beef cows w/ rep heifers & bulls
- Will provide all labor and management
- Wants a fair return



# Definition

What is Depreciation?

Depreciation – reduction in value and/or obsolescence of an asset over time (not tax depreciation)



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# Landlord Situation

## Wants to cover FC & VC

- Buildings - repairs & depreciation
- Fence - repairs & depreciation
- Taxes & Ins
- Labor
- Return to ownership – land & improvements

## Must cover additional VC

- Repairs
- Taxes
- Insurance

# Tenant Situation

## Wants to cover FC & VC

- Machinery - repairs & depreciation
- Livestock – taxes & depreciation
- All operating costs
- Labor
- Management
- Return to ownership

## Must cover additional VC

- Repairs
- Taxes
- All other operating costs
- Labor?



# Landlord Situation

<u>125 acres \$300,000</u>	<u>Wants</u>	<u>Must</u>
Build., fence, & water	\$11,000	\$1,000
Taxes & Ins	\$2,719	\$2,719
Labor	\$1,000	\$0
Return to ownership	\$18,125	\$0
Total costs	\$32,844	\$3,719
Per ac rent	\$263	\$30

# Tenant Situation

<b><u>50 cows</u></b>	<b><u>Wants</u></b>	<b><u>Must</u></b>
Machinery	\$4,300	\$1,200
Livestock	\$3,500	\$700
Operating costs	\$11,500	\$11,500
Labor	\$5,000	\$4,000
Management	\$5,000	\$0
Return to ownership	\$6,300	\$0
Total	\$35,600	\$17,400
Total income	\$21,500	\$21,500
Net income	-\$14,100	\$4,100
Per ac rent	n/a	\$33



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# What Now?

The owner wants \$263 per acre and the tenant is losing \$14,100 per year

- Is there room to negotiate?
- Look at the must's
- \$30 vs. \$33 per acre
- Trade services or costs
- Tenant over-estimated costs – under-estimated returns
- Use equipment, custom work,... spread fixed costs



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# Other Issues?

What's the value of

- A great tenant and/or landlord
- The farm is next door, just down the road
- Soils - better or worse, could lead to higher or lower yields
- Length of lease

# Valuation of Capital Assets

New costs/value (buildings, fences, silos...)

- Depreciation – spread value over life of asset
  - e.g.  $100\% \div 25 \text{ years} = 4\% \text{ per year}$
  - If already 15 years old, value is  $(25-15) \div 25 = 40\%$  of new value, but will last 20 more years
- Interest on current value of assets
- Repairs - actual or 1.5%
- Taxes - actual or 1%
- Insurance - actual or 0.5%



# Valuation of Buildings

		New	15 yrs Old	
Building	Rate	\$40,000	\$16,000	40% of new
Depreciation (100/25 yrs)	4.0%	\$1,600	\$800	100%/20 yr
Interest	5.0%	\$2,000	\$800	
Repairs	1.5%	\$600	\$240	
Taxes	1.0%	\$400	\$160	
Insurance	0.5%	\$200	\$80	
Total costs		\$4,800	\$2,080	



# Comments

## Calculations will not overcome

- Costs-price squeeze – lack of profits
- Surplus of land for leasing
- Shortage of land for leasing
- High land values
- Poor landlord/tenant relations
- Lack of common sense



# Resources

**Farm Business Management Update, Virginia Tech Department of Agricultural and Applied Economics:**

<http://news.cals.vt.edu/fbm-update/>

**Office of Farmland Preservation, Farm Link Program, Virginia Department of Agriculture and Consumer Services:**

<http://www.vdacs.virginia.gov/preservation/farmlink.shtml>

**Planning the Future of Your Farm: A Workbook Supporting Farm Transfer Decisions, Virginia Edition:**

<http://pubs.ext.vt.edu/446/446-610/446-610.html>

**Iowa State Extension, Sample Farm Leases:**

<https://www.extension.iastate.edu/agdm/wdleasing.html>

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# Questions?

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