

# AGRICULTURE

## Efficiency in agriculture (or any sector)

- Want decision-making agents to acct for all social costs/benefits in deciding
- what to produce (go for high value)
  - how much labor to use
    - equate MPL to MPL in other sectors
    - equate MP effort to disutility of effort
  - capital/investment including land improvement, fallowing, fertilizers, ...
- Use best available technology, optimal scale.

get people out of ag!

## Obvious way to achieve it

1) Fully-assigned, transferrable property rights in land. (identifiable owners)

so that managers who can create highest value with land can bid for it, get it.

Best: ownership vested in individuals (not family groups, tribe, ...) because it's hard to get group to agree to a deal. Harder to buy off all naysayers.

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(2)

## Efficiency (cont.)

### Obvious ways (cont.)

2) Agent who makes production/investment decisions is "residual claimant" (gets profit) free of constraints (except regs/taxes to fix externalities)

### Labor systems

Often, landowners & potential labor are different households. How to cooperate?

### Obviously good systems:

- Landowner is manager/residual claimant, hires labor at fixed wage.
- Labor is residual claimant, rents land at fixed rent (in money or stuff)
- Manager (in England, "farmer") is residual claimant, rents land at fixed rent, hires labor at fixed wage.

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3

## Labor systems (cont.)

### Sharecropping (or share tenancy)

Common in many times, places  
"Rent" to landlord is share of crop  
"Wage" to labor is share of crop

Old idea (Adam Smith):

it is inefficient because either landlord or laborer must be controlling prodn but controller gets only a share of output, so will under-invest, under-work (low effort)

For example:

for eff'cy, exert effort to point where  
marginal disutility effort = MPL

sharecropper will choose

"

↙ his share of crop  
=  $\alpha \cdot MPL$

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Labor systems (cont.)

Sharecropping (cont.)

New view:

- 1) potential inefficiency controlled by other features of sharecropping deals
  - laborer & tenant share control
  - contract specifies shares of investment costs

- 2) why do sharecropping at all? response to absence of
  - perfect insurance mkt
  - perfect financial mkt (liquidity constraints)
  - perfect info

Why not

Fixed Rent

- 1) Risk to tenant (absence of insurance)
- 2) Can't pay rent if crops fail (liquidity const.)
- 3) Can't pre-specify, monitor all inputs needed from landlord, so give incentive by...

Fixed Wage

- 1) Risk to landlord (..... insurance)
- 2) Can't pay wage if crops fail (same)
- 3) Can't .....  
From tenant, so give incentive by...

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## Economic history in developed countries

### US

Always freehold, transferable, individual land ownership

Lots of "family farms," owned or cash-rent

Sharecropping in South 1870s-1950s

### Britain

Around same time as Industrial Revolution  
"Agricultural Revolution" - relatively rapid  
adoption of new technology &  
very high TFP (relative to Europe)

Big estates (few landowners)

Land rented on long-term leases to  
wealthy "farmers" who hire wage labor

Contrast to Europe.

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## Economic History

### UK (cont.)

How did UK get 18th C. system?

### Enclosure movement

#### Medieval system

3 Common Fields, common pasture & waste

A family owns or rents many scattered small plots  
All plots ploughed, planted, fallowed as one big field  
in coordination with other villagers.

"Tragedy of the commons" avoided by rules  
that specify how many animals each family  
can have

#### Enclosure

Reallocate fields, divide up common & waste, give  
each family a consolidated land holding,  
matching pre-enclosure share of land.

After 1700, big estates buy up small holdings.

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7

## Role in Development Today

In many poor countries, property rights in  
(and not fully assigned to individual households,  
transferable

What kind of inefficiencies?  
How can it be fixed?

Many govt. policies that redistribute land,  
regulate farm labor, tenancy.  
Effects?