PRODUCTION COSTS

SOME MORE DECISION MAKING

1. You own 200 acres of land and considering :

100 acres of soybeans	**100 acres of corn**
TR / ac. - TC / ac. = TNR / ac.	**TR / ac. - TC / ac. = TNR / ac.**
TNR / ac. = $10	**TNR / ac. = $9**

What is the opportunity cost of land for growing soybeans?

$9 / acre, because I am forgoing the opportunity to make $9 / ac.

in order to make $10 / ac.

Therefore economic profit from raising soybeans is :

$10 / ac. - $9 / ac. = $1 / ac.

When we own the land we must include the opportunity cost of land.

Therefore total cost must include the opportunity costs of all factors of production we OWN!!

2. Assume you purchased a tractor last year for $25,000. A neighbor asks you to disk a 30 acre field for him and he offers you $5.00 / ac.

Should you accept his offer?

TR = $30 /ac X $5.00 /ac. = $150

Economic cost of disking 30 acres:

1. **8 hrs. of labor @ the oppty. cost of labor**

2. **Operating costs : fuel and oil only for this example**

3. **Expected repairs: you decide you will chance a breakdown for a certain amount (a contingency fund)**

4. **Travel expenses : Cost of getting tractor to the site**

A Small Budget

Total revenue			**$150**
Economic costs:			
labor	**8 hrs. X $5.00 /hr.**	**$ 40**	
operating costs	**8 hrs. X $6.00/hr.**	**$ 48**	
expected repairs		**$ 20**	
travel		**$ 20**	
total economic cost			**$128**
Expected net revenue			**$ 22**

Marginal cost < Marginal revenue
($4.27/ac.) ($5.00/ac.)

NOTE: We could have left labor out of our cost structure and found expected net revenue, and then determined whether this figure was worth your opportunity cost for labor.

ex. marginal revenue - marginal cost = marginal net revenue

if MNR was greater than your oppty. cost of labor you would take the job because you would earn economic profit.

if MNR was just equal to your oppty. cost of labor, you would take the job also, you would earn a normal profit.

A normal profit is earned when :

TR - (Accounting cost + oppty. cost) = 0

3. You have 5 acres of lettuce ready for harvest, you must harvest today.

Expected yield = 20,000 lbs.

Total production costs to date = $1,000 /ac. ($.05 /lb.)

Harvest and selling cost = $.02 /lb.

Market price = $.04 /lb.

Do we harvest and sell?

Production cost	**$.05 /lb.**	**(SUNK COST, IRRELEVANT)**
Harv. & selling cost	**$.02 /lb.**	
Total cost	**$.07 /lb.**	
Market price	**$.04 /lb.**	

We harvest and sell ! Because:

We will lose $.03 /lb. if we harvest and sell, but if we don't harvest and sell we lose $.05 /lb.

Total net revenue = TR - TC

TNR, no sell = 0 - $.05 /lb. = -$.05 /lb.

TNR, sell = $.04 /lb. - $.07 /lb. = -$.03 /lb.

Therefore we minimize our losses by harvesting and selling.

Remember the economic decision rule : if MR > MC then it looks good

MR = $.04 /lb.

MC = $.02 /lb.

MNR = +$.02 /lb.

If MNR covers your oppty. cost of harvesting and selling then go for it!