

# Trading Game

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# Introduction

- This game was developed to teach people about a nutrient trading game from a participants perspective
- Simplistic, textbook trading system where the catchment contains only 1 sheep/beep farmer and 1 dairy farmer
- Everyone will be working in groups and will be either a sheep/beef farm or a dairy farm



# Format

- In each period, you will need to decide on a production level that will maximise your profit given the regulatory state
- Three possible regulatory states -
  - No nutrient loss regulation
  - Restrictions on nutrient loss
  - Tradable allowances



# Handout

<b>Units Produced</b>	0	2	4	6	8	10	12	14
<b>Profit from production</b>	-\$12	-\$1	\$8	\$14	\$19	\$24	\$28	\$26
<b>Allowances required</b>	0	1	2	3	4	5	6	7



Decide on your production level  
given that there is no regulation

## Under No Regulation

Farm type	Production	Profit	Nutrient loss
Sheep/beef	12 units	\$26	6
Dairy	6 units	\$26	12
Total	-	\$52	18



## New regulation –

- Dairy farms can lose no more than 6 units of nutrients
- Sheep/beef farms can lose no more than 2 units of nutrients

Decide on your production level  
given the new regulation



## Limits on Nutrient Loss

Farm type	Production	Profit	Nutrient loss
Sheep/beef	4 units	\$7	2
Dairy	3 units	\$14	6
Total	-	\$21	8



## New regulation –

- Dairy farms are allocated 6 allowances which can be traded
- Sheep/beef farms are allocated 2 allowances which can be traded

**Undertake trades within your group  
and decide on your production level**

**Hint – Check the increase (decrease) in profit from  
increasing (decreasing) your production levels  
before agreeing to a trade**



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# Tradable Allowances

Farm type	Production	Profit	Nutrient loss
Sheep/beef	8 units	\$10	4
Dairy	2 units	\$17	4
Total	-	\$27	8

- in this example the dairy farm sold 2 allowances to the sheep/beef farm for \$10



# Comparison

Farm type	Production (units)	Profit	Nutrient loss
No Regulation	Meat = 12 Milk = 6	\$52	18
Limit on Nutrient Loss	Meat = 4 Milk = 3	\$21	8
Tradeable Allowances	Meat = 8 Milk = 2	\$27	8



# Important Lessons

- Restrictions on nutrient loss improve environmental outcomes but reduce profitability
- Relative to limits on nutrient loss, tradable allowances do not change the environmental outcome but increases firms' profitability
- Caveat – This system is highly simplified and trading systems need to be designed for the situation involved

