



Risky Business: Managing Dairy Volatility

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Nuffield Scholar 2016

Background



- Kilmessan, Co. Meath
- Dairy Farming with my father, David since 2009
- 2016 Nuffield Scholar
- Chosen Topic:

“Risk Management Solutions for the Irish Dairy Industry”

What is a Nuffield Scholarship



- Leadership Development Program
- Aim to build the capacity of the Agriculture sector
- Part of Nuffield International (Irl, UK, Aus, NZ, Can, Fra, NL)
- Travel Bursary – minimum of 12 weeks international travel
- Research a chosen topic
- Produce and present a comprehensive report
- Supported and financed by industry sponsors

My travels

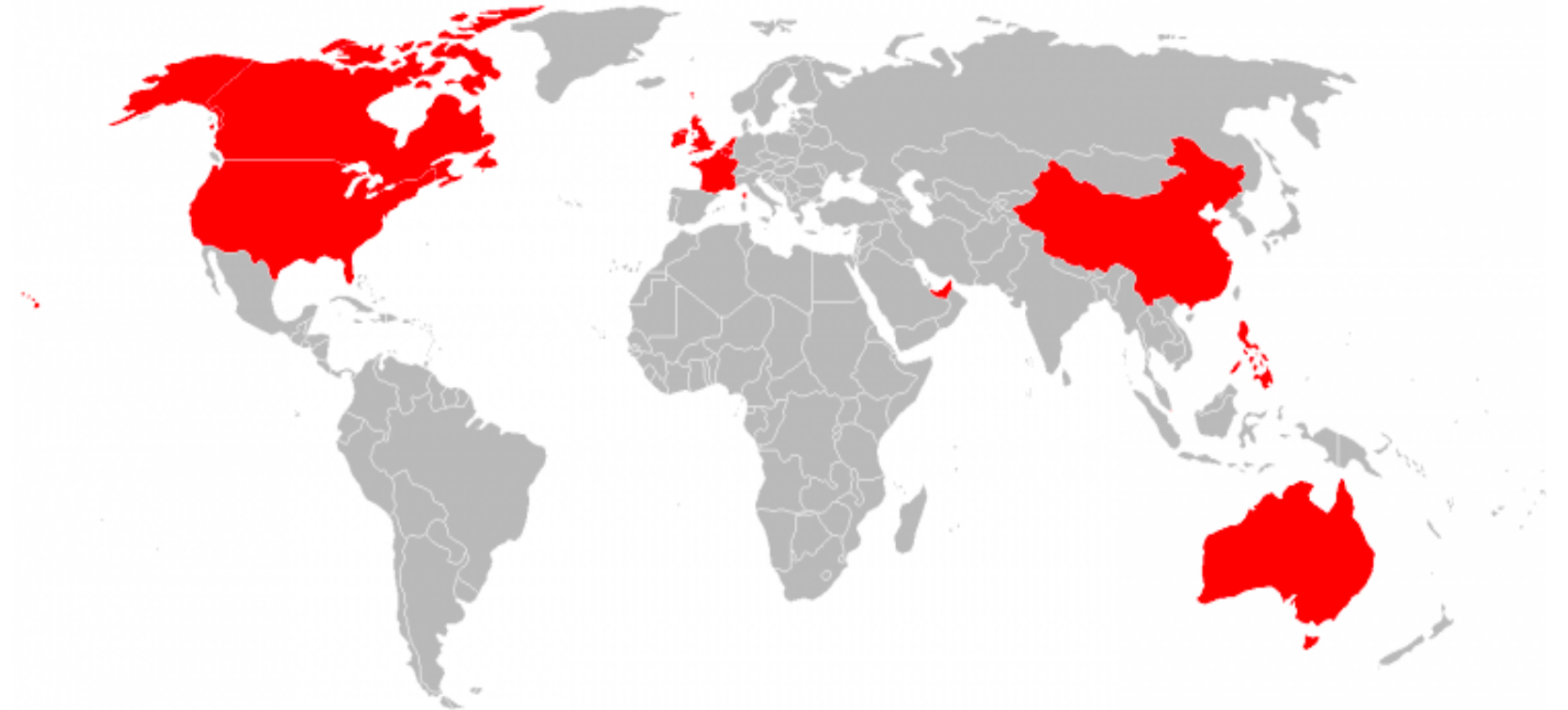


15 weeks

25 Flights

13 countries

63 meetings



US
Canada
UK
The Netherlands

Belgium (Brussels)
China
Australia
Singapore

Key Areas of Research



1. Cause and Effect of Volatility
2. USA- Futures and Options,
3. MPP Dairy
4. Role of CAP and Market Instruments
5. Taxation

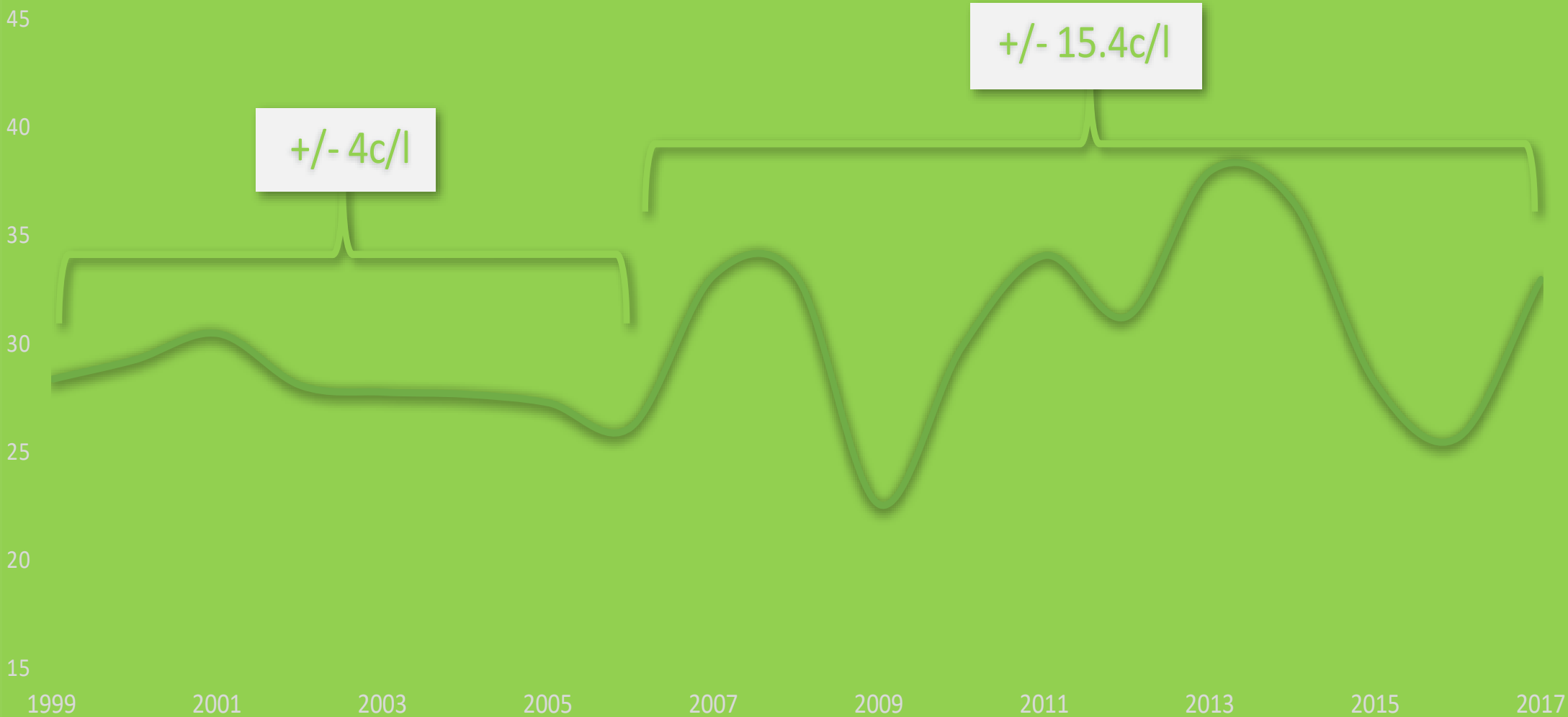
Cause of Volatility



- Inelastic supply – 9-12 month time lags
- Slow and steady demand growth
- Shift in US and EU agri policy
- Weather shocks
- Dependence on oil producing economies – volatility x volatility

Volatility increasing....

Irish Milk Price History (c/L)



Effect of Volatility?

41 c/Litre



21c/litre



Futures and Options



- Approx 15% of US milk hedged on CME – Mainly large scale farms
- Farmers hedge 25-50% of milk
- Margin Account – up to 15c/l hedged required
- Co-ops provide forward contracts via Futures
- Issues exist with EU Futures market – index, product mix, stock reporting
- Not a solution for Irish farmers

Margin Protection Program



- Voluntary MOFC insurance scheme
- Does not interfere with the market
- Tiered premiums for small and large producers
- Max \$8 coverage costs 0.9c/l for small producer (<2m litres)
- Dwindling participation due to low pay out
- Not suitable to EU due to diverse production models



Taxation

- Australian Farm Management Deposit Scheme
 - Deposit pre-Tax income in good years
 - Designed to manage income volatility due to weather
 - \$6bn currently on deposit
- USA
 - Cash accounting – pre buying
 - Carry Lossess – up to 20 years

Taxation



- Irish Taxation

- Income Averaging not effective against extreme volatility
- Capital Allowances encourage spending to reduce tax
- Need to incentivise building a 'Rainy Day Fund'

Recommendations for Farmers



1. Own Your Risk

- Identify it, Measure it, Manage it
- Develop resilient, efficient businesses to survive the effects of volatility
- Most cost effective risk management tool

2. Magic Number

- Need to determine their cash breakeven point
- Form the basis for deciding on a risk management strategy

3. Hedging

- Only fix enough milk to breakeven in the lowest of milk price years
- This can be determined by knowing your 'magic number'
- Don't try to beat the market

Recommendations for Co-ops



1. Fixed Milk Price Schemes

- They offer the simplest and cost effective way to hedge future milk prices
- Hedging and income averaging rolled into one
- The Futures market should be the hedge of last resort

2. Co-op Support

- Reduce the extremes of volatility
- Currently dampens price signals
- Should be done in transparent manner

Recommendations for Govt and EU



1. EU Volatility Loan Scheme

- EIB supported loan scheme
- EU's primary dairy risk management tool
- 'Volatility Loan' fund of €150m would equate to 2-3c/l on Irelands annual production
- No cost to the tax payer

2. Taxation Deposit

- Income averaging not effective
- Tax efficient reserve fund
- Change to State Aid rules
- Very effective in Oz & NZ

Case Study: Farmer Leo



- Recent new entrant
- Leased Farm
- Milking 200 cows
- Debt Levels of €3k/cow
- No SFP
- Wife and young family

Farm Facts

- 1m litres sold
- 3.4% Pr and 4% Bf
- ePM Dairy Costs 22c/l
- Drawings €50,000
- Cap Repayments €50,000
- Breakeven Price 32c/l



What will these do for Leo at 21c/l?

- Increased milk constituents to 3.6Pr & 4.2Bf
- Hedged 30% of milk @31c/l
- Co-op announce support of 1c/l
- Volatility loan fund available of 3c/l
- Draws down €25k from Tax Deposit scheme

Base Milk Price	21 c/l
Constituents	2 c/l
FMP @ 31c/l	3 c/l
Co-op	1 c/l
Volatility Loan	3 c/l
Tax Deposit	<u>2 c/l</u>
Effective Milk Price	32 c/l



What will these do for Leo at 41c/l?

- Increased milk constituents to 3.6Pr & 4.2Bf
- Hedged 30% of milk @31c/l
- Co-op announce clawback of 1c/l
- Volatility loan fund paid back - 3c/l
- Deposits €25k in Tax Deposit Scheme

Base Milk Price	41 c/l
Constituents	4 c/l
FMP @ 31c/l	-3 c/l
Co-op	-1 c/l
Volatility Loan	-3 c/l
Tax Deposit	<u>-2.5 c/l</u>
Effective Milk Price	35.5 c/l

Effect on Volatility



• Low	21c/l	v	32c/l
• High	41c/l	v	35.5
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• Volatility	20c/l	v	3.5c/l



With Risk comes Rewards

But with Unknown Risk comes Bankruptcy

Thank You