ICOS National Conference 2018

Strategic Risk facing the Co – operative sector

Thursday 8th November

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Ireland Feed

- 7.5 million tonnes of feed
- Historically 2.4 million tonnes of which is Irish Cereals
  - 1.5 million tonnes barley
  - 0.7 million tonnes wheat
  - Rest is oats, rapeseed, field beans

- 2018 spring barley harvest reduced >30%
- 2018 wheat harvest reduced by 20%

- 2018 cereal production reduced by 650k tonnes

	Republic of Ireland	
Millions	Stock	Tonnes
Dairy Cows	1.43	2.15
Beef Cows	1.08	1.87
Sows	0.15	0.98
Poultry	11.00	0.47
Ewes	2.44	0.19
Total		5.67

- 4.21 million tonnes for Ruminant feed

Risk

- Feed availability
  - Forward planning
  - Logistics
  - Weather Patterns
- Factors influencing pricing
  - Currency
  - Trade wars
  - Freight / oil price
  - Speculative Funds
- Feed Safety
  - Pesticides
  - GMO
  - Undesirable Substances
  - Aflatoxins

Feed Availability

- Supply of native grains
- Fodder related demand
- Ability to meet sudden spikes in demand
- Weather in the origin

Ireland Feed & Compounder Coverage

Imports Million Tonnes	2017	Jan – Jul 2018	Change
Maize	1.11	0.77	+24%
Wheat / Barley	0.48	0.41	+53%
Soya Bean Meal	0.47	0.35	+24%
Wheatfeed	0.20	0.17	+44%
Beet / Citrus	0.20	0.23	+174%
Soya Hulls	0.40	0.24	+11%
Maize Gluten	0.39	0.22	+5%
Distillers	0.51	0.29	-1%
Palm Kernel	0.08	0.10	+115%
Total	5.02	3.51	+25%

- Fodder survey
  - Initial indications in July – 8mmt fodder shortage / 2mmt feed
  - September indications – 3mmt fodder shortage / 0.75mmt feed
- Total additional feed requirement estimated at 1.4 million tonnes (+28%)
- Significant fodder conserved since September

USDA World Supply / Demand

World Ending Stocks	16-17	17-18	18-19
Maize	227	198	159
Wheat	257	275	260
Soya Beans	97	97	110

Maize

- 68 mmt reduction in world stocks in 2018-19 vs 2016-17
- 25% tariff on US corn

Soybeans

- 13 mmt increase in world stocks vs 16-17
- 17.2 mmt reduction in Argentina crop
- US - China trade issues

Wheat

- Supply issues in Germany, Eastern Europe, Ukraine and Russia

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Fibre Supplies

Soya Hulls

- Soybean crop in Argentina down 17.2 mmt versus last year due to drought (37.8 mmt vs 55 last year)
- Argentina is worlds largest exporter of products extracted from soybeans
- LY Argentina exported +/- 2.1 mmt soybean hull pellets
- 19% imported by Ireland

Beet / Citrus Pulp

- Limited Citrus Pulp availability
- European Beet Pulp areas also affected by drought

Palm Kernel

- Malaysia production = 5.5 – 6.0 MMT
- European Demand = 2.0 – 2.5 MMT
- Turkey, Pakistan & Saudi Arabia are all growing Markets
- Drought impacting UK and European fodder supplies & increasing Palm demand

Product Lead Times

Origin	Product		Lead Time
US	Maize	Soymeal	4 weeks
	Corn Gluten	Soyhulls	
	Distillers	Beet Pulp	
Europe	Rapeseed	Beet Pulp	1 week
	Sunflower	Wheatfeed	
	Maize		
	Wheat Distillers		
Malaysia	Palm kernel		2 Months
South America	Maize	Soya Hulls	4 Weeks
	Soya	Citrus Pulp	

- Most products are generally sold 2-3 months in advance
- Availability to fill sudden spikes in demand can be limited / expensive
- Adequate forward planning essential

Factors Influencing Pricing

- Trade Wars
- Currency fluctuations
- Cost of Freight
- Futures markets – CBOT/Liffe/Matif
- Speculative Funds

Trade war: Changing the flow - Soybeans

	16/17	17/18	18/19
Production			
USA	116.9	120.0	127.6
Brazil	114.6	119.8	120.5
Argentina	55.0	37.8	57.0
PGY	10.3	9.8	9.8
China	12.9	14.2	15.0
Total production	**348.1**	**337.5**	**369.5**
Exports			
USA	58.9	57.9	56.1
Brazil	63.1	76.2	75.0
Argentina	7.0	2.1	8.0
PGY	6.1	6.3	5.9
Total exports	**147.4**	**153.1**	**157.4**
China Imports	**93.5**	**94.0**	**94.0**
	63.4%	61.4%	59.7

- US and Brazil are biggest exporters of beans to China
- Argentina generally crushes beans and exports meal, oil and hulls

- Argentina crop reduced by 17 mmt
- China stops buying US soybeans
- China has to compete with domestic SAM crush for soybeans
- SAM crush capacity under utilized due to lack of soybeans
- Destination crush (e.g. Rotterdam / Hamburg) has to maximize crush capacity by crushing cheap US soybeans
- Limited available crush capacity globally will keep protein expensive until trade issues are resolved or new crop in SAM is harvested

Trade war: Changing the flow - Distillers

Country	2015	% of Total
World	12694	
China	6461	51%
Mexico	1650	13%
Vietnam	650	5%
South Korea	635	5%
Canada	512	4%
Thailand	396	3%
Ireland	248	2%
Japan	241	2%
Indonesia	229	2%
Turkey	207	2%
Taiwan	196	2%
United Kingdom	152	1%
Spain	150	1%
Israel	124	1%
Colombia	123	1%
Morocco	110	1%

- Two destinations make up 64% of market

Country	2017	
World	11077	
Mexico	2181	20%
Turkey	1417	13%
South Korea	984	9%
Thailand	748	7%
Indonesia	725	7%
Canada	704	6%
Japan	473	4%
China	377	3%
Ireland	347	3%
Vietnam	312	3%
Spain	297	3%
Israel	267	2%
Taiwan	257	2%
Morocco	250	2%
United Kingdom	213	2%
Colombia	207	2%

- Seven destinations make up 65% of market

- China stops buying US Distillers
- China replaces protein with Canadian Canola and Black Sea Sunflower
  - Rape and Sunflower increase in price

- Turkey, Israel & Morocco increase distillers usage vs Sunflower
- US reduces reliance on China for distillers
  - Distillers price remains supported

Trade war: Trump v Turkey

- Turkey and US enter trade war
- US doubles tariffs on steel and aluminium
- Turkish Lira crashes
- Turkey cant afford US distillers and cancels contracts
- Price of US Distillers falls temporarily

Implications of Trade War

The US lost its biggest customer for it's beans leaving it with a major supply glut.

China on the other hand had to look to other origins for it's demand.

Brazil was the natural choice as Chinese already prefer BRL beans over Argy.

With China's state reserves + big buying from BRL it has managed so far but still remains to be seen going into the new year.

The main concern is that BRL farmers are running out of beans because of massive selling early in the season due to weak local currency.

EUR - USD

Decline in Turkish Lira impacts Euro

Turkish Lira begins to recover

Brexit talks between UK and EU break down

FOMC announces 8 interest rate hikes for 2018-20

Italy announces “Peoples Budget”

US markets struggle on concerns of failed US China trade talks

Price Pressure

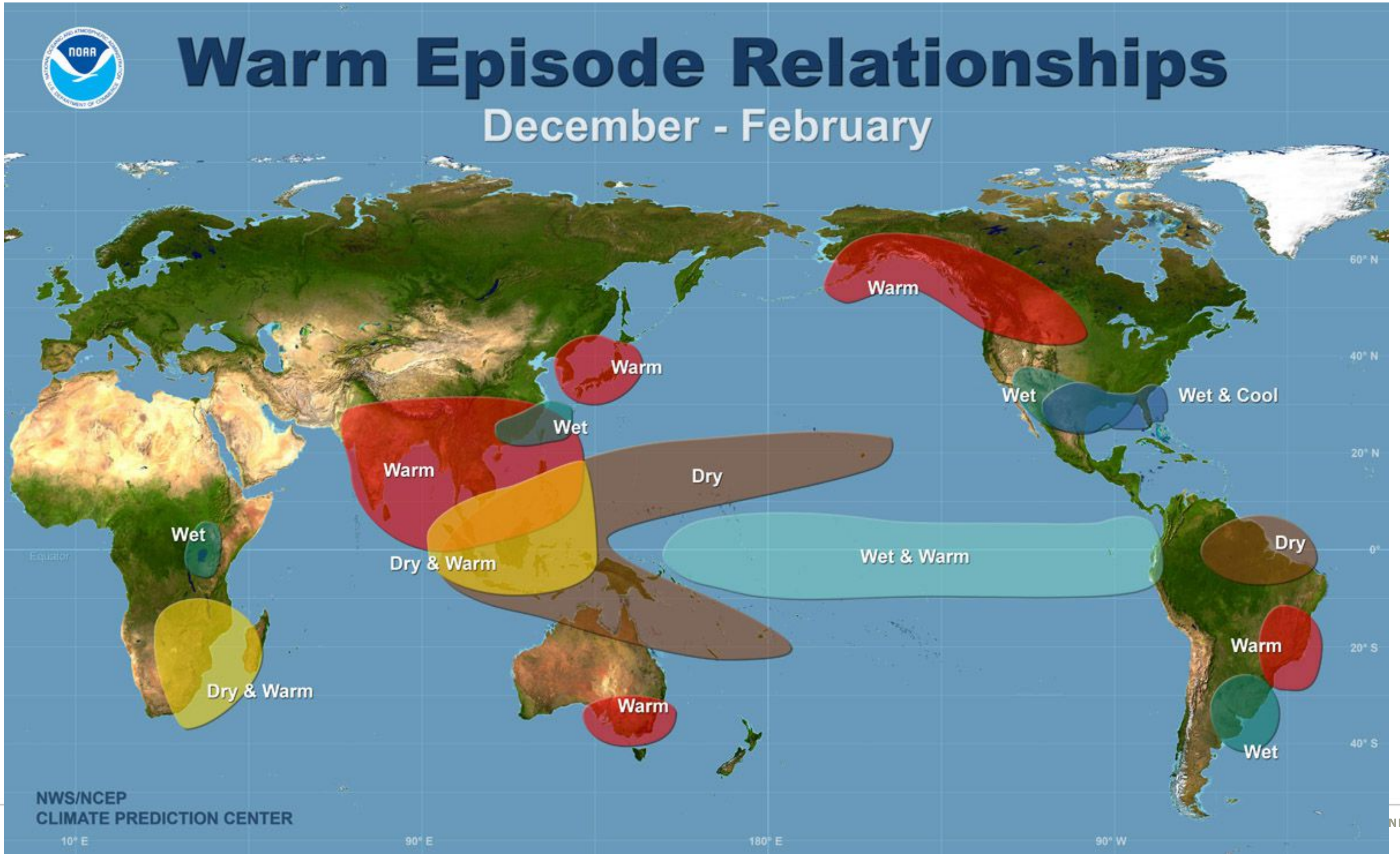
Product	Winter Price vs Last Year
Soya Bean Meal	+€25
Rapeseed Meal	+€60
Maize	+€20
Barley	+€50
Wheat	+€50
Soya Hulls	+€30
Palm Kernel	+€30
Wheatfeed	+€35
Beet Pulp	+€50
Maize Distillers	+€30
Corn Gluten	+€40

- Greatest price increase from European products
- Low water on rivers around Europe reducing availability of Rapeseed
- Drought severely affects European crop of Wheat, Barley and Maize

Food / Feed risks

- Aflatoxins
- Pesticides Use
- GMO Approvals
- Environmental commitments
- Disease – African Swine Fever

Weather influences on feed prices – El Niño



The river Rhine close to Mainz/Mannheim in Germany – record low water heavily affects shipping traffic

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GMO, Pesticides and Aflatoxin

GMO

- Consumer aversion to GMO
- EU slow to approve GMO events
- EU removal of Vit B2 produced by Bacillus subtilis
  - No non GMO sources of Vit B2 available for Organic farmers

Pesticides

- Re-approval of pesticides will be a concern for cereal producers
- Glyphosate issue
- Removal / reduction of MRLs will impact availability of products

Aflatoxin

- GMO crops are more resistant to pests & fungus
- Non GMO crops require greater pesticide and fungicide use
- Removing pesticide and fungicide increases risk of crop damage
- Increased crop damage increases risk of Aflatoxin

Environmental Commitments

- Firm commitments on Paris agreement & EU Legislation
  - 30% of GHG from agriculture
  - Rapid increase in cow numbers since 2015
  - Target
    - 30% reduction in GHG
    - 5% reduction in ammonia
- Possible Solutions
  - Feed additives to mitigate methane emissions
  - Protein levels in feed to improve nitrate efficiency and minimise ammonia emissions

Disease – African Swine Fever

- Highly Contagious & Fatal virus found in pigs
- No food safety risk
- Spread by
  - Wild Boar
  - Humans
  - Uncooked meat
  - Transport
- Impact on meat and grain markets