

Analyzing the Impact of Brazilian, Chinese, Indian and Turkish Wheat Support Policies on U.S. and Global Wheat Production, Trade and Prices

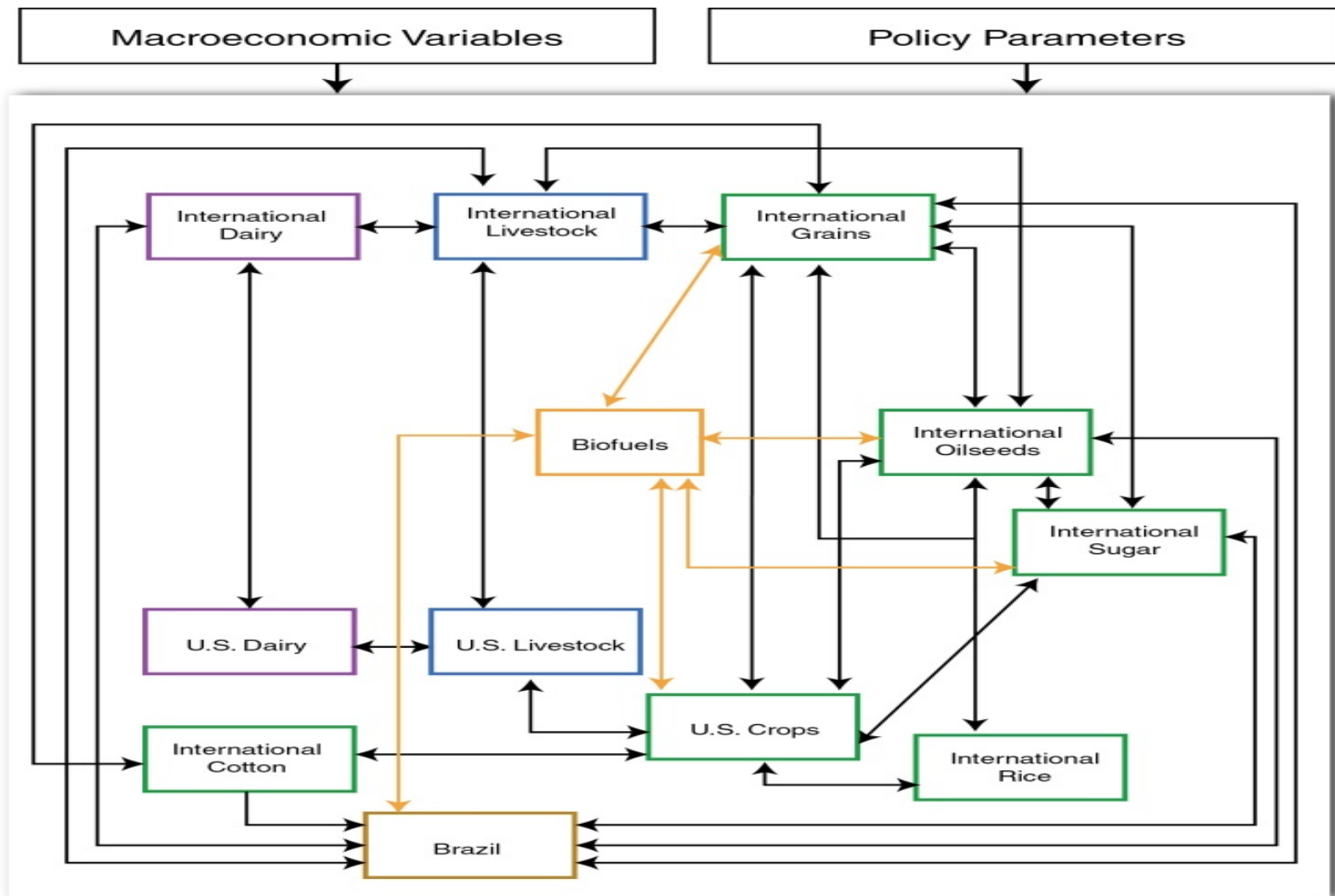
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Model Description

- ✿ The CARD-FAPRI modeling system is a system of econometric, multimarket, price driven models of global agriculture.
- ✿ The models cover all major temperate crops, sugar, biofuels, dairy, and livestock and meat products for all major producing and consuming countries.
- ✿ The modeling system allows for interaction among the different markets to capture derived demands for feed in the livestock sector, feedstock in biofuel production, substitutions possibilities between close substitutes, as well as competition for land.
- ✿ The interlinked models are designed to generate ten-year baseline projections of supply, utilization and prices for major agricultural commodities in major producing and consuming countries.

CARD-FAPRI Modeling System





Scenario Descriptions

- ✚ Baseline: Business-as-usual scenario
- ✚ Scenario 1: Removal of support prices and input subsidies in Brazil only.
- ✚ Scenario 2: Removal of support prices and input subsidies in China only.
- ✚ Scenario 3: Removal of support prices and input subsidies in India only.
- ✚ Scenario 4: Removal of support prices and input subsidies in Turkey only.
- ✚ Scenario 5: Removal of support prices and input subsidies in Brazil, China, India, and Turkey simultaneously.



Methodology

- ✿ The starting point was a baseline (“business-as-usual”) in which all relevant domestic wheat policies in four key countries (Brazil, China, India, and Turkey) were included.
- ✿ The modeling system was then modified to simulate scenarios in which the wheat price supports and input subsidies were removed in each of the four countries separately and then removed in all countries simultaneously.
- ✿ After the changes, the modeling system was run again and a new global market equilibrium was obtained for each scenario.
- ✿ Each scenario was compared against the baseline to estimate the impacts of specific support measures on both U.S. and global agricultural markets.



Methodology

✚ To remove the wheat support prices

- An ad-valorem equivalent of the support price relative to the local price was calculated by year in history and the 3-year average (2011/12-2013/14) was used to reduce the price in the projection period.
- The support price was zero if the local price was above the support price for all the years considered.

✚ To remove the wheat input subsidies

- The subsidy was first converted to a per hectare equivalent.
- The converted subsidy was then added to the cost of production in the wheat area equations that drive production in the modeling system.



Methodology

- ✚ The removal of the wheat price supports, which results in a reduction in domestic prices, was implemented on the baseline level domestic prices.
- ✚ The change in inputs subsidies was added to the domestic cost of production in each scenario.
- ✚ The results embed the changes and adjustments observed in all the interrelated markets that are needed to reach an new equilibrium under the new economic environment induced by the policy changes.
- ✚ Additionally, the results for production, use, and net trade by country as well as world wheat prices and net trade are presented in terms of deviations from the baseline.
- ✚ We show the impacts for marketing year 2021/22, which is the last year of projection, on the key country, the U.S., and the world.

Scenario 1 Results

Impact of Removal of Brazilian Wheat Domestic Support in 2021/22

BRAZIL	<i>Production</i>	<i>Use</i>	<i>Feed</i>	<i>Food & other</i>	<i>Ending stocks</i>	<i>Net trade^a</i>	
Baseline	6,437	13,626	321	12,313	992	-6,206	
Scenario	6,377	13,808	329	12,458	1,021	-6,417	
% change	-0.93%	1.33%	2.41%	1.18%	2.94%	3.41%	
U.S.	<i>Production</i>	<i>Use</i>	<i>Feed</i>	<i>Food & other</i>	<i>Ending stocks</i>	<i>Net trade^a</i>	<i>Farm Price</i>
Baseline	58,195	58,355	4,414	30,453	23,489	23,358	246
Scenario	58,217	58,338	4,403	30,450	23,485	23,393	246
% change	0.04%	-0.03%	-0.24%	-0.01%	-0.02%	0.15%	0.10%
WORLD	<i>Wheat price</i>			<i>Wheat net trade^a</i>			
Baseline	287			121,153			
Scenario	287			121,308			
% change	0.11%			0.10%			

^a A positive number denotes an increase in net exports (reduction in net imports). A negative number represents an increase in net imports (reduction in net exports). Prices are in US\$/metric ton and quantities are in thousand metric tons.

Scenario 2 Results

Impact of Removal of Chinese Wheat Domestic Support in 2021/22

CHINA	<i>Production</i>	<i>Use</i>	<i>Feed</i>	<i>Food & other</i>	<i>Ending stocks</i>	<i>Net trade^a</i>	
Baseline	127,486	203,719	22,256	106,910	74,553	-1,936	
Scenario	122,481	205,605	22,311	108,143	75,151	-8,211	
% change	-3.93%	0.93%	0.25%	1.15%	0.80%	324.07%	
U.S.	<i>Production</i>	<i>Use</i>	<i>Feed</i>	<i>Food & other</i>	<i>Ending stocks</i>	<i>Net trade^a</i>	<i>Farm Price</i>
Baseline	58,195	58,355	4,414	30,453	23,489	23,358	246
Scenario	58,984	57,892	4,023	30,400	23,469	24,571	252
% change	1.28%	-0.79%	-8.86%	-0.17%	-0.08%	5.19%	2.31%
WORLD	<i>Wheat price</i>			<i>Wheat net trade^a</i>			
Baseline	287			121,153			
Scenario	293			125,750			
% change	2.39%			3.79%			

^a A positive number denotes an increase in net exports (reduction in net imports). A negative number represents an increase in net imports (reduction in net exports). Prices are in US\$/metric ton and quantities are in thousand metric tons.

Price Support Implemented for China

	Price Support Calculation					
	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013	2013/2014
Support price* (RMB/MT)	1,546	1,695	1,860	2,049	2,101	2,170
Reference price (US\$/MT)	264	205	284	290	332	309
Exchange rate** (RMB/US\$)	6.95	6.83	6.77	6.57	6.19	5.85
Local price*** (RMB/MT)	1,854	1,414	1,943	1,922	2,074	1,824
Support****	0%	20%	0%	7%	1%	19%
	Input Subsidy Calculation					
Estimated payments to wheat (US\$ millions)						
Direct payment program for wheat	600	590	600	620	620	620
Fuel/fertilizer subsidies for wheat	2,600	3,000	3,300	3,600	4,400	4,500
Total subsidy	3,200	3,590	3,900	4,220	5,020	5,120
Subsidy per hectare						
Subsidy per hectare (US\$/hectare)	136	148	161	174	207	212
Subsidy per hectare (RMB/hectare)	942	1,010	1,089	1,143	1,280	1,242
*Price for red wheat only until 2012/13 and price was converted to marketing year and local currency from calendar year and U.S. dollars; **Exchange rates are obtained from IHS Global Insight; ***Reference price converted to local currency and adjusted for import tariffs; ****Percent difference between the local price and the support price						

Scenario 3 Results

Impact of Removal of Indian Wheat Domestic Support in 2021/22

INDIA	<i>Production</i>	<i>Use</i>	<i>Feed</i>	<i>Food & other</i>	<i>Ending stocks</i>	<i>Net trade^a</i>	
Baseline	98,250	112,334	185	97,145	15,003	835	
Scenario	95,775	113,426	195	98,166	15,066	-2,667	
% change	-2.52%	0.97%	5.17%	1.05%	0.41%	-419.37%	
U.S.	<i>Production</i>	<i>Use</i>	<i>Feed</i>	<i>Food & other</i>	<i>Ending stocks</i>	<i>Net trade^a</i>	<i>Farm Price</i>
Baseline	58,195	58,355	4,414	30,453	23,489	23,358	246
Scenario	58,696	58,063	4,166	30,419	23,478	24,129	250
% change	0.86%	-0.50%	-5.61%	-0.11%	-0.05%	3.30%	1.45%
WORLD	<i>Wheat price</i>			<i>Wheat net trade^a</i>			
Baseline	287			121,153			
Scenario	291			122,752			
% change	1.51%			1.32%			

^a A positive number denotes an increase in net exports (reduction in net imports). A negative number represents an increase in net imports (reduction in net exports). Prices are in US\$/metric ton and quantities are in thousand metric tons.

Price Support Implemented for India

	Price Support Calculation					
Price Support	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013	2013/2014
Support price (Rs/MT)	10,000	10,800	11,000	11,200	12,850	13,500
Reference price* (US\$/MT)	206	187	282	261	309	268
Exchange rate** (Rs/US\$)	43.5	48.4	45.7	45.1	45.4	43.4
Local price (Rs/MT)	8,970	9,046	12,886	11,751	14,040	11,614
Support***	11.48%	19.39%	0.00%	0.00%	0.00%	16.24%
	Inputs Subsidy Calculation					
					100%	20%
Non-Product Specific Amber Box (US\$ billions)					33	6.6
Subsidy for wheat****					7.48	1.54
Subsidy by hectare (US\$/hectare)					249	50
Subsidy per hectare (Rs/hectare)					10,805	
*No. 2 soft red winter, Gulf Ports; **Exchange rates are obtained from IHS Global Insight; ***Percent difference between the local price and the support price; ****Based on area shares						

Scenario 4 Results

Impact of Removal of Turkish Wheat Domestic Support in 2021/22

TURKEY	<i>Production</i>	<i>Consumption</i>	<i>Feed</i>	<i>Food & other</i>	<i>Ending stocks</i>	<i>Net trade^a</i>	
Baseline	18,376	18,455			2,965	-87	
Scenario	16,756	18,648			2,991	-1,899	
% change	-8.81%	1.04%			0.87%	2081.49%	
U.S.	<i>Production</i>	<i>Use</i>	<i>Feed</i>	<i>Food & other</i>	<i>Ending stocks</i>	<i>Net trade^a</i>	<i>Farm Price</i>
Baseline	58,195	58,355	4,414	30,453	23,489	23,358	246
Scenario	58,420	58,218	4,302	30,436	23,480	23,706	248
% change	0.39%	-0.23%	-2.52%	-0.05%	-0.04%	1.49%	0.70%
WORLD	<i>Wheat price</i>			<i>Wheat net trade^a</i>			
Baseline	287			121,153			
Scenario	289			122,473			
% change	0.72%			1.09%			

^a A positive number denotes an increase in net exports (reduction in net imports). A negative number represents an increase in net imports (reduction in net exports). Prices are in US\$/metric ton and quantities are in thousand metric tons.

Scenario 5 Results

Impact of Removal of All Countries Wheat Domestic Support in 2021/22

BRAZIL	<i>Production</i>	<i>Use^a</i>	<i>Feed</i>	<i>Food & other</i>	<i>Net trade^b</i>
Baseline	6,437	13,626	321	12,313	-6,206
Scenario	6,404	13,727	325	12,394	-6,325
% change	-0.52%	0.74%	1.27%	0.66%	1.92%
CHINA	<i>Production</i>	<i>Use^a</i>	<i>Feed</i>	<i>Food & other</i>	<i>Net trade^b</i>
Baseline	127,486	203,719	22,256	106,910	-1,936
Scenario	122,787	205,085	22,298	107,807	-7,561
% change	-3.69%%	0.67%	0.19%	0.84%	290.51%
INDIA	<i>Production</i>	<i>Use^a</i>	<i>Feed</i>	<i>Food & other</i>	<i>Net trade^b</i>
Baseline	98,250	112,334	185	97,145	835
Scenario	95,845	112,686	189	97,475	-1,902
% change	-2.45%	0.31%	2.11%	0.34%	-327.79%

^a Includes ending stocks. ^b A positive number denotes an increase in net exports (reduction in net imports). A negative number represents an increase in net imports (reduction in net exports). Prices are in US\$/metric ton and quantities are in thousand metric tons.

Scenario 5 Results

Impact of Removal of All Countries Wheat Domestic Support in 2021/22

TURKEY	<i>Production</i>	<i>Consumption</i>	<i>Feed</i>	<i>Food & other</i>	<i>Ending stocks</i>	<i>Net trade^a</i>	
Baseline	18,376	18,455			2,965	-87	
Scenario	16,828	18,312			2,946	-1,491	
% change	-8.40%	-0.78%			-0.64%	1612.33%	
U.S.	<i>Production</i>	<i>Use</i>	<i>Feed</i>	<i>Food & other</i>	<i>Ending stocks</i>	<i>Net trade^a</i>	<i>Farm Price</i>
Baseline	58,195	58,355	4,414	30,453	23,489	23,358	246
Scenario	59,619	57,532	3,708	30,360	23,464	25,546	256
% change	2.45%	-1.41%	-15.99%	-0.31%	-0.10%	9.37%	4.13%
WORLD	<i>Wheat price</i>			<i>Wheat net trade^a</i>			
Baseline	287			121,153			
Scenario	299			127,283			
% change	4.26%			5.06%			

^a A positive number denotes an increase in net exports (reduction in net imports). A negative number represents an increase in net imports (reduction in net exports). Prices are in US\$/metric ton and quantities are in thousand metric tons.



Conclusions

- ❖ Wheat support policies and trade barriers encourage domestic production and depress world prices.
- ❖ Removal of these policies, which reduces domestic wheat prices, results in a reduction in domestic production and an increase in domestic consumption in the distorting country.
- ❖ A less distorted agricultural sector in these advanced developing countries could potentially benefit U.S. wheat producers and provide opportunities for enhanced trade flows and higher U.S. prices.
- ❖ Given that the distortions are in a commodity in which the U.S. has a large market share, removal of the support in these countries can have positive impacts on U.S. agriculture.



Conclusions

- ➊ Globally, the removal of price support and input subsidies leads to an increase in world wheat prices (lower supply, increased demand) and global net trade relative to the base case although the magnitude of the increase depends on the size of the removal in each country.
- ➋ Generally speaking, the higher wheat prices encourage net exporting countries to increase production and exports while discouraging net importers from increasing their demand and imports of wheat.



Thank you



Model Description

- ✚ The system specifies behavioral equations for production, consumption, stocks and trade between countries/regions and solves for a set of representative (world) prices that equate supply and demand for all commodities and in all countries modeled.
- ✚ Using price transmission equations, the domestic price for each country is linked to the representative world price through exchange rates and other price policy wedges.
- ✚ The macroeconomic variables (GDP, GDP deflators, exchange rate) and agricultural and trade policies are exogenous to the model.
- ✚ Most of the models within the system are commodity models with the exception of Brazil and the U.S., which are the two country models comprised of their respective integrated agricultural markets within each country.



Country Coverage

International Grains	International Oilseeds	Cash Crops	International Livestock	International Dairy	Biofuels
Wheat	Soybeans	Sugar	Beef	Milk	Ethanol
Rice	Rapeseed		Pork	Butter	Biodiesel
Corn	Sunflower Seed		Mutton	Cheese	
Barley	Ground Nuts		Poultry	Non-fat Dry Milk	
Sorghum	Palm		Eggs	Whole-fat Dry Milk	

Scenario 1 Results

Impact of Removal of Brazilian Wheat Domestic Support in 2021/22

BRAZIL	<i>Production</i>	<i>Use</i>	<i>Feed</i>	<i>Food & other</i>	<i>Ending stocks</i>	<i>Net trade^a</i>		
Baseline	6,437	13,626	321	12,313	992	-6,206		
Scenario	6,377	13,808	329	12,458	1,021	6,417		
% change	-0.93%	1.33%	2.41%	1.18%	2.94%	3.41%		
U.S.	<i>Production</i>	<i>Use</i>	<i>Feed</i>	<i>Food and other</i>	<i>Ending stocks</i>	<i>Net trade^a</i>	<i>Farm Price</i>	
Baseline	58,195	58,355	4,414	30,453	23,489	23,358	246	
Scenario	58,217	58,338	4,403	30,450	23,485	23,393	246	
% change	0.04%	-0.03%	-0.24%	-0.01%	-0.02%	0.15%	0.10%	
WORLD	<i>Wheat price</i>	<i>Wheat net trade^a</i>	<i>Corn Price</i>	<i>Corn net trade^a</i>	<i>Barley price</i>	<i>Barley net trade^a</i>	<i>Sorghum price</i>	<i>Sorghum net trade^a</i>
Baseline	287	121,153	244	106,503	206	20,506	252	8,475
Scenario	287	121,308	244	106,469	206	20,504	252	8,478
% change	0.11%	0.10%	0.06%	-0.03%	0.05%	-0.01%	0.05%	0.03%

^a A positive number denotes an increase in net exports (reduction in net imports). A negative number represents an increase in net imports (reduction in net exports). Prices are in US\$/metric ton and quantities are in thousand metric tons.

Scenario 2 Results

Impact of Removal of Chinese Wheat Domestic Support in 2021/22

CHINA	<i>Production</i>	<i>Use</i>	<i>Feed</i>	<i>Food & other</i>	<i>Ending stocks</i>	<i>Net trade^a</i>		
Baseline	127,486	203,719	22,256	106,910	74,553	-1,936		
Scenario	122,481	205,605	22,311	108,143	75,151	-8,211		
% change	-3.93%	0.93%	0.25%	1.15%	0.80%	324.07%		
U.S.	<i>Production</i>	<i>Use</i>	<i>Feed</i>	<i>Food and other</i>	<i>Ending stocks</i>	<i>Net trade^a</i>	<i>Farm Price</i>	
Baseline	58,195	58,355	4,414	30,453	23,489	23,358	246	
Scenario	58,984	57,892	4,023	30,400	23,469	24,571	252	
% change	1.28%	-0.79%	-8.86%	-0.17%	-0.08%	5.19%	2.31%	
WORLD	<i>Wheat price</i>	<i>Wheat net trade^a</i>	<i>Corn Price</i>	<i>Corn net trade^a</i>	<i>Barley price</i>	<i>Barley net trade^a</i>	<i>Sorghum price</i>	<i>Sorghum net trade^a</i>
Baseline	287	121,153	244	106,503	206	20,506	252	8,475
Scenario	293	125,750	245	106,487	207	20,489	253	8,463
% change	2.39%	3.79%	0.33%	-0.01%	0.44%	-0.09%	0.35%	-0.15%

^a A positive number denotes an increase in net exports (reduction in net imports). A negative number represents an increase in net imports (reduction in net exports). Prices are in US\$/metric ton and quantities are in thousand metric tons.

Scenario 4 Results

Impact of Removal of Turkish Wheat Domestic Support in 2021/22

TURKEY	<i>Production</i>	<i>Consumption</i>	<i>Feed</i>	<i>Food & other</i>	<i>Ending stocks</i>	<i>Net trade^a</i>		
Baseline	18,376	18,455			2,965	-87		
Scenario	16,756	18,648			2,991	-1,899		
% change	-8.81%	1.04%			0.87%	2081.49%		
U.S.	<i>Production</i>	<i>Use</i>	<i>Feed</i>	<i>Food and other</i>	<i>Ending stocks</i>	<i>Net trade^a</i>	<i>Farm Price</i>	
Baseline	58,195	58,355	4,414	30,453	23,489	23,358	246	
Scenario	58,420	58,218	4,302	30,436	23,480	23,706	248	
% change	0.39%	-0.23%	-2.52%	-0.05%	-0.04%	1.49%	0.70%	
WORLD	<i>Wheat price</i>	<i>Wheat net trade^a</i>	<i>Corn Price</i>	<i>Corn net trade^a</i>	<i>Barley price</i>	<i>Barley net trade^a</i>	<i>Sorghum price</i>	<i>Sorghum net trade^a</i>
Baseline	287	121,153	244	106,503	206	20,506	252	8,475
Scenario	289	122,473	245	106,472	206	20,519	252	8,476
% change	0.72%	1.09%	0.14%	-0.03%	0.20%	0.06%	0.14%	0.005%

^a A positive number denotes an increase in net exports (reduction in net imports). A negative number represents an increase in net imports (reduction in net exports). Prices are in US\$/metric ton and quantities are in thousand metric tons.

Scenario 3 Results

Impact of Removal of Indian Wheat Domestic Support in 2021/22

INDIA	<i>Production</i>	<i>Use</i>	<i>Feed</i>	<i>Food & other</i>	<i>Ending stocks</i>	<i>Net trade^a</i>		
Baseline	98,250	112,334	185	97,145	15,003	835		
Scenario	95,775	113,426	195	98,166	15,066	-2,667		
% change	-2.52%	0.97%	5.17%	1.05%	0.41%	-419.37%		
U.S.	<i>Production</i>	<i>Use</i>	<i>Feed</i>	<i>Food and other</i>	<i>Ending stocks</i>	<i>Net trade^a</i>	<i>Farm Price</i>	
Baseline	58,195	58,355	4,414	30,453	23,489	23,358	246	
Scenario	58,696	58,063	4,166	30,419	23,478	24,129	250	
% change	0.86%	-0.50%	-5.61%	-0.11%	-0.05%	3.30%	1.45%	
WORLD	<i>Wheat price</i>	<i>Wheat net trade^a</i>	<i>Corn Price</i>	<i>Corn net trade^a</i>	<i>Barley price</i>	<i>Barley net trade^a</i>	<i>Sorghum price</i>	<i>Sorghum net trade^a</i>
Baseline	287	121,153	244	106,503	206	20,506	252	8,475
Scenario	291	122,752	245	106,519	206	20,529	252	8,505
% change	1.51%	1.32%	0.19%	0.02%	0.36%	0.11%	0.09%	0.35%

^a A positive number denotes an increase in net exports (reduction in net imports). A negative number represents an increase in net imports (reduction in net exports). Prices are in US\$/metric ton and quantities are in thousand metric tons.

Scenario 5 Results

Impact of Removal of All Countries Wheat Domestic Support in 2021/22

BRAZIL	<i>Production</i>	<i>Use^a</i>	<i>Feed</i>	<i>Food & other</i>	<i>Net trade^b</i>
Baseline	6,437	13,626	321	12,313	-6,206
Scenario	6,404	13,727	325	12,394	-6,325
% change	-0.52%	0.74%	1.27%	0.66%	1.92%
CHINA	<i>Production</i>	<i>Use^a</i>	<i>Feed</i>	<i>Food & other</i>	<i>Net trade^b</i>
Baseline	127,486	203,719	22,256	106,910	-1,936
Scenario	122,787	205,085	22,298	107,807	-7,561
% change	-3.69%%	0.67%	0.19%	0.84%	290.51%
INDIA	<i>Production</i>	<i>Use^a</i>	<i>Feed</i>	<i>Food & other</i>	<i>Net trade^b</i>
Baseline	98,250	112,334	185	97,145	835
Scenario	95,845	112,686	189	97,475	-1,902
% change	-2.45%	0.31%	2.11%	0.34%	-327.79%

^a Includes ending stocks. ^b A positive number denotes an increase in net exports (reduction in net imports). A negative number represents an increase in net imports (reduction in net exports). Prices are in US\$/metric ton and quantities are in thousand metric tons.

Scenario 5 Results

Impact of Removal of All Countries Wheat Domestic Support in 2021/22

TURKEY	<i>Production</i>	<i>Consumption</i>	<i>Feed</i>	<i>Food & other</i>	<i>Ending stocks</i>	<i>Net trade^a</i>		
Baseline	18,376	18,455			2,965	-87		
Scenario	16,828	18,312			2,946	-1,491		
% change	-8.40%	-0.78%			-0.64%	1612.33%		
U.S.	<i>Production</i>	<i>Use</i>	<i>Feed</i>	<i>Food and other</i>	<i>Ending stocks</i>	<i>Net trade^a</i>	<i>Farm Price</i>	
Baseline	58,195	58,355	4,414	30,453	23,489	23,358	246	
Scenario	59,619	57,532	3,708	30,360	23,464	25,546	256	
% change	2.45%	-1.41%	-15.99%	-0.31%	-0.10%	9.37%	4.13%	
WORLD	<i>Wheat price</i>	<i>Wheat net trade^a</i>	<i>Corn Price</i>	<i>Corn net trade^a</i>	<i>Barley price</i>	<i>Barley net trade^a</i>	<i>Sorghum price</i>	<i>Sorghum net trade^a</i>
Baseline	287	121,153	244	106,503	206	20,506	252	8,475
Scenario	299	127,283	246	106,527	207	20,511	253	8,489
% change	4.26%	5.06%	0.53%	0.02%	0.84%	0.02%	0.46%	0.16%

^a A positive number denotes an increase in net exports (reduction in net imports). A negative number represents an increase in net imports (reduction in net exports). Prices are in US\$/metric ton and quantities are in thousand metric tons.

Price Support Implemented for Brazil

	Price Support Calculation					
Price Support	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013	2013/2014
Support price (US\$/MT)	213	285	284	329	254	260
Reference price ^a (US\$/MT)	206	187	282	261	309	268
Support ^b	3%	53%	1%	26%	0%	0%
The reference price is for soft red winter wheat; Percent difference between the reference price and the support price. No input subsidies were implemented for Brazil based on DTB Associates 2014 Report.						

Price Support Implemented for Turkey

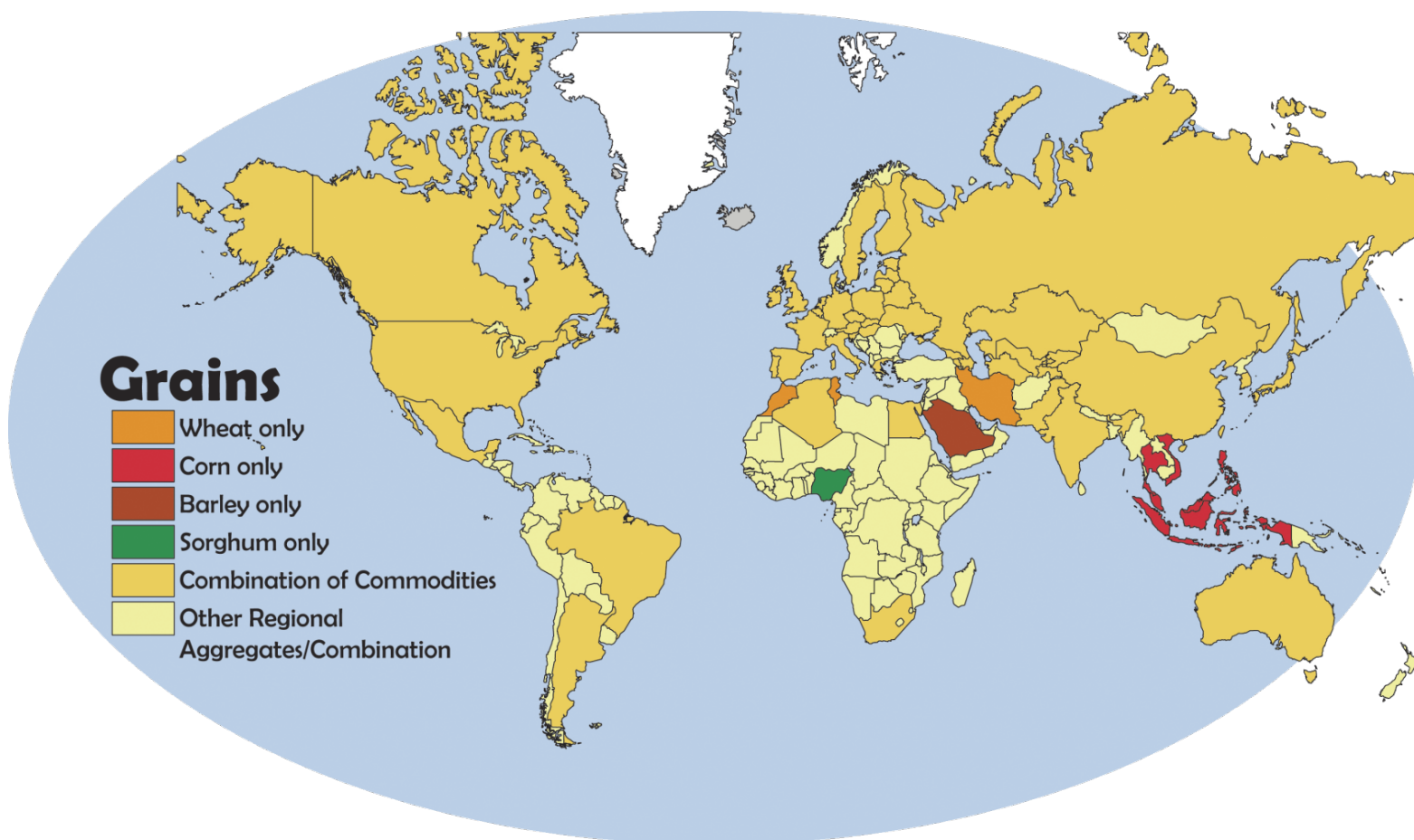
	Price support calculation					
	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14
Support price (TL/MT)	500	513	563	613	665	720
Reference price (US\$/MT)	264	205	284	290	332	309
Exchange rate* (TL/US\$)	0.6928	0.6625	0.6545	0.5643	0.5555	0.4862
Local price (US\$/MT)	419	340	477	565	657	699
Support**	19.3%	50.7%	17.9%	8.3%	1.2%	3.0%
	Input subsidy calculation					
Premium***				24 US\$/MT (56 US\$/Ha)		
Seed subsidy				37 US\$/Ha		
Soil analysis subsidy				12 US\$/Ha		
Fuel subsidy				21 US\$/Ha		
Fertilizer subsidy				27 US\$/Ha		
Total				153 US\$/Ha		
*Exchange rates are obtained from IHS Global Insight; **Percent difference between the local price and the support price; *** Based on the implied yield of 2.31 tons of wheat per hectare						



Data

- ✚ USDA/ERS – PS&D View commodity data
 - Livestock (April/November releases)
 - All Other Commodities (October/December releases)
- ✚ USDA Foreign Agriculture Service Attaché Reports
 - Biofuels
- ✚ International Financial Statistics
 - Historical macro data (October/December issues)
- ✚ Global Insight
 - Global projection macro data
- ✚ FAO
- ✚ Official government websites/statistics
- ✚ International Data Base U.S. Bureau of census
 - <http://www.census.gov/ipc/www/idbnew.html>
 - Downloadable in spreadsheet format

Country Coverage by Commodity



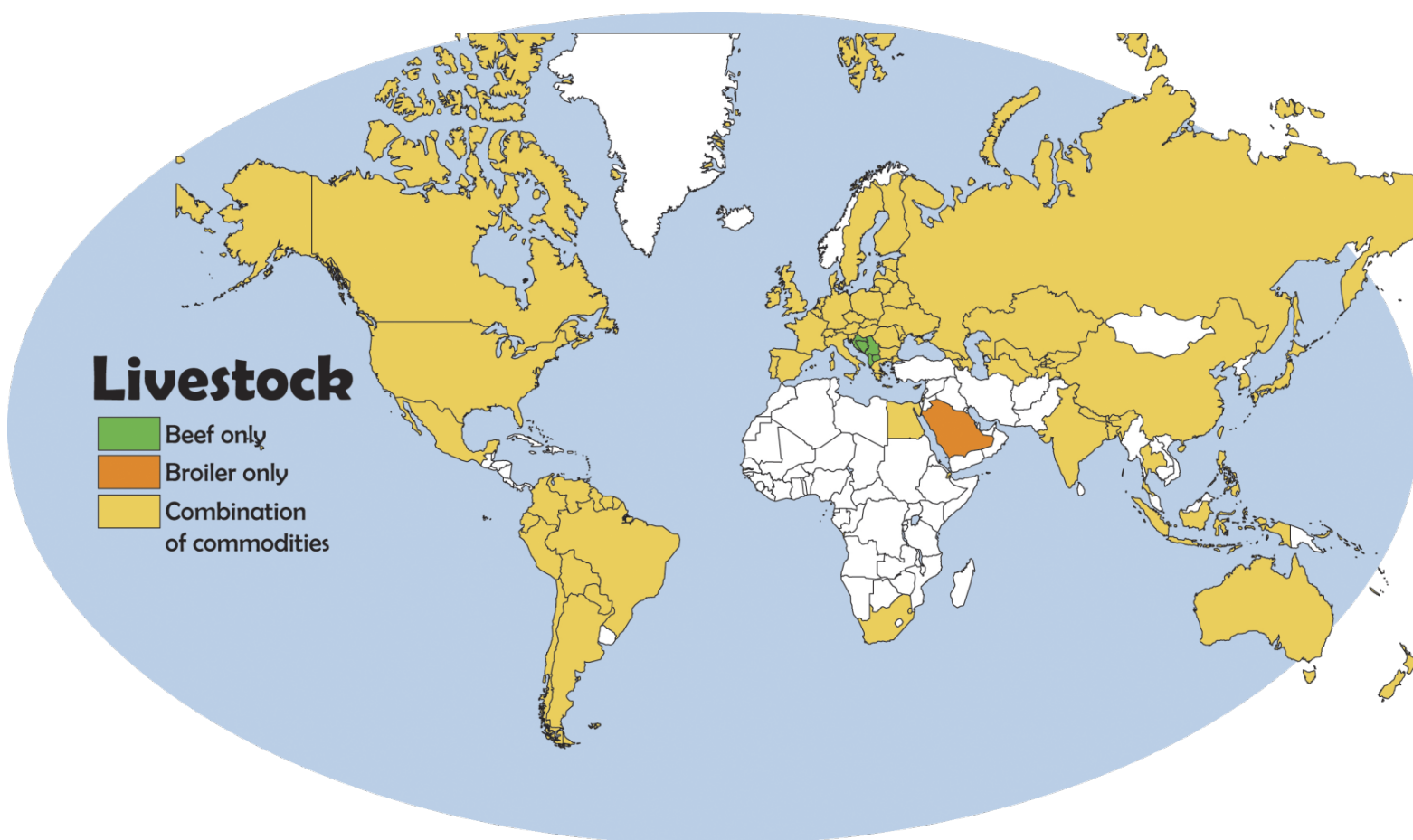
Country Coverage by Commodity



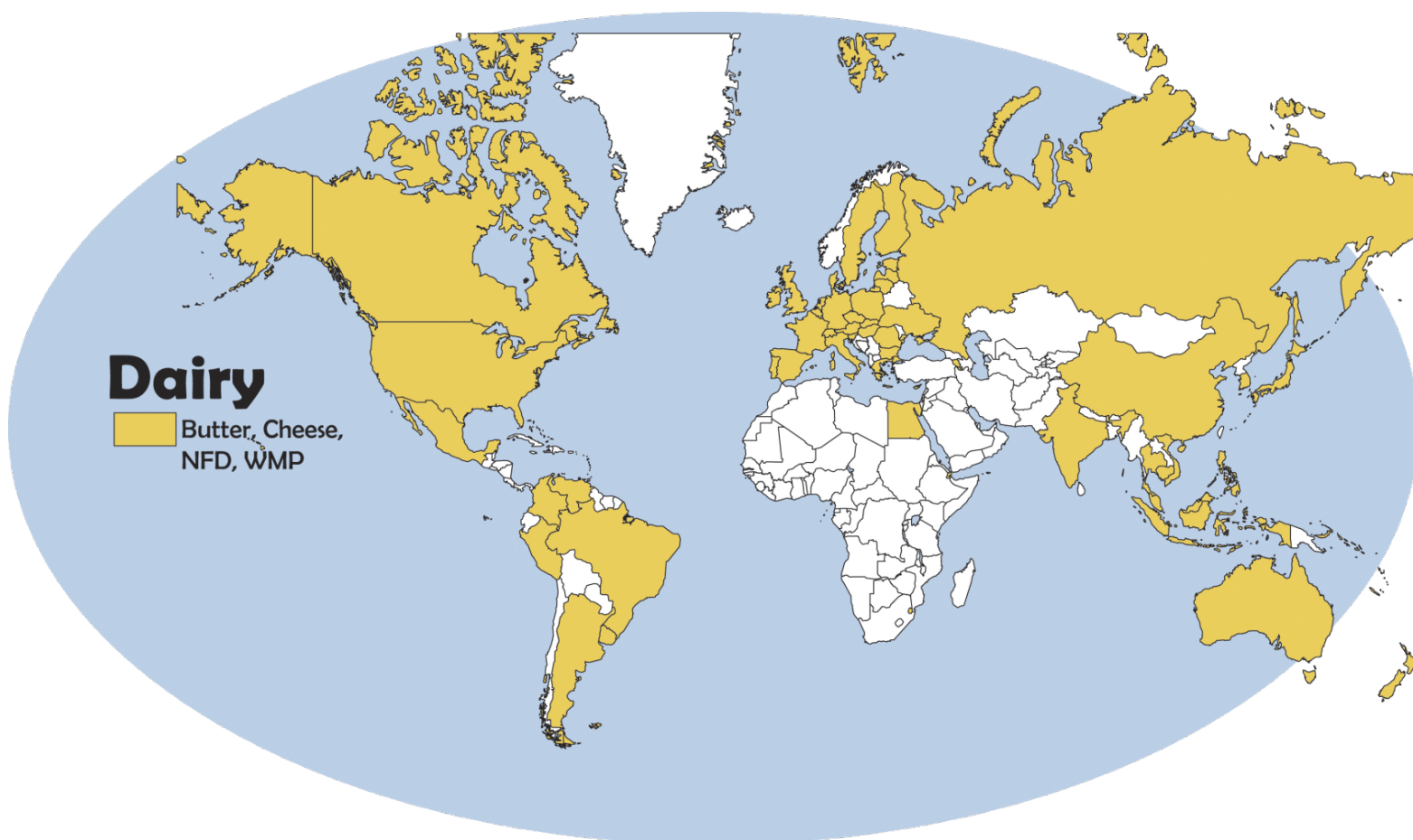




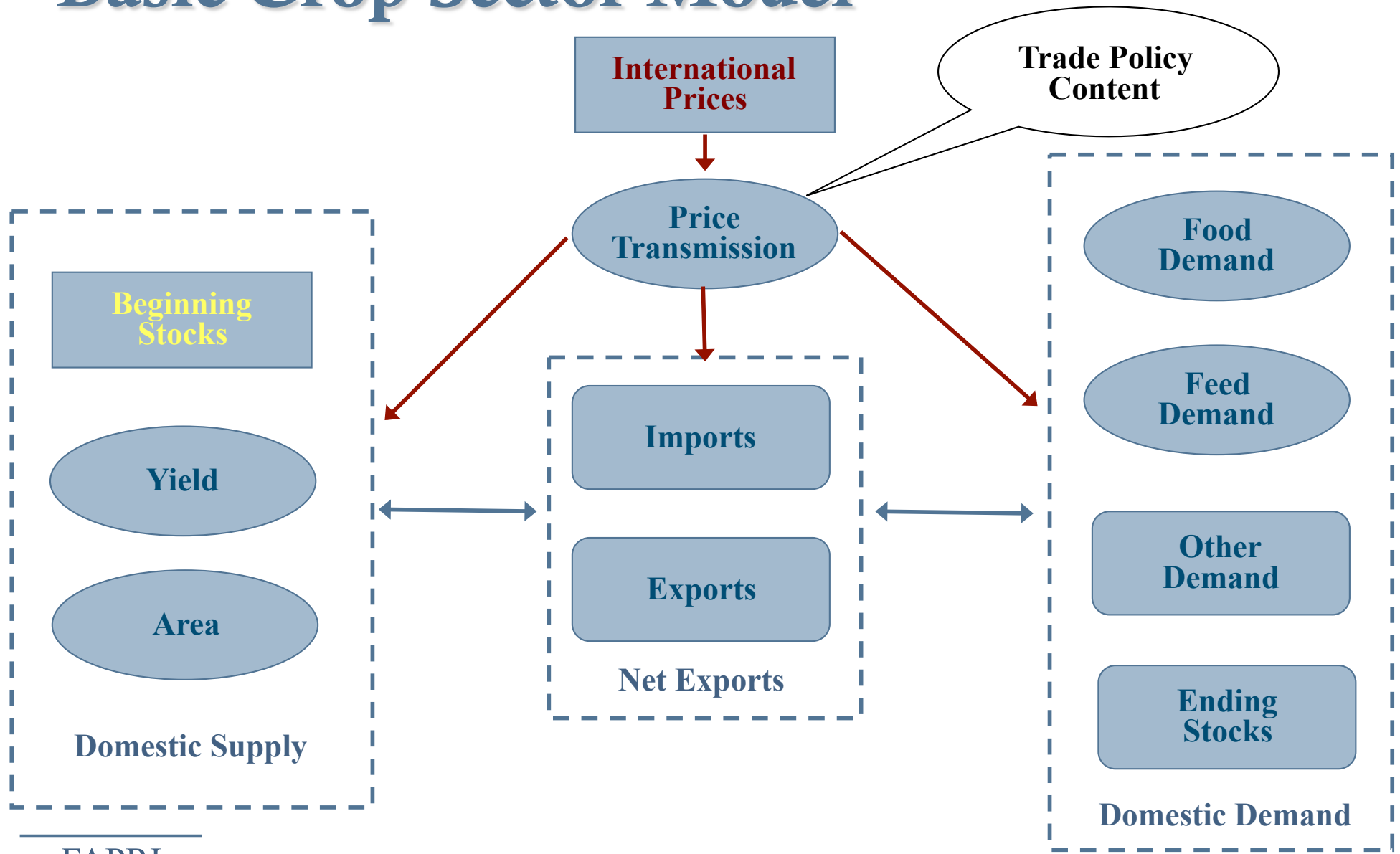
Country Coverage by Commodity



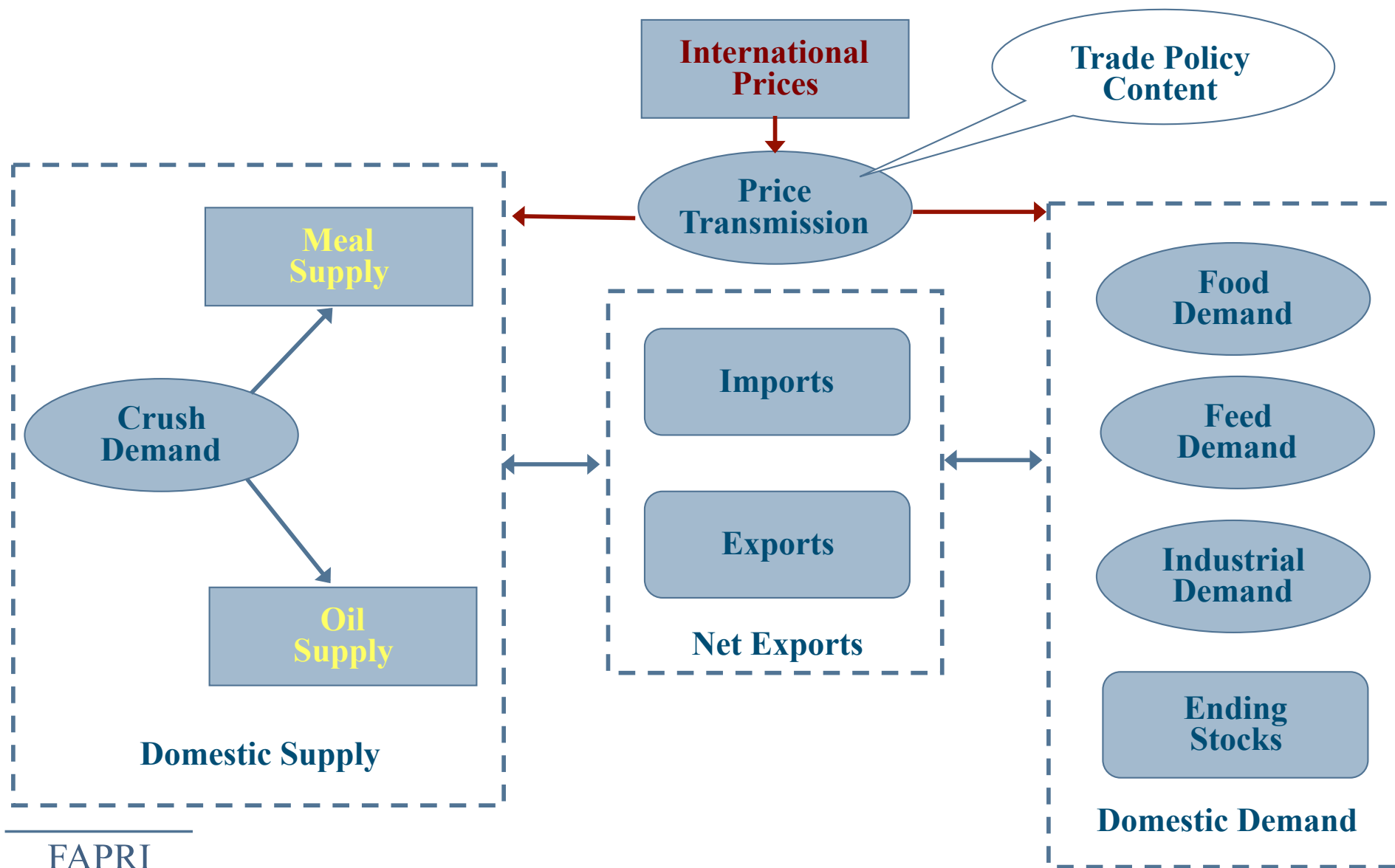
Country Coverage by Commodity



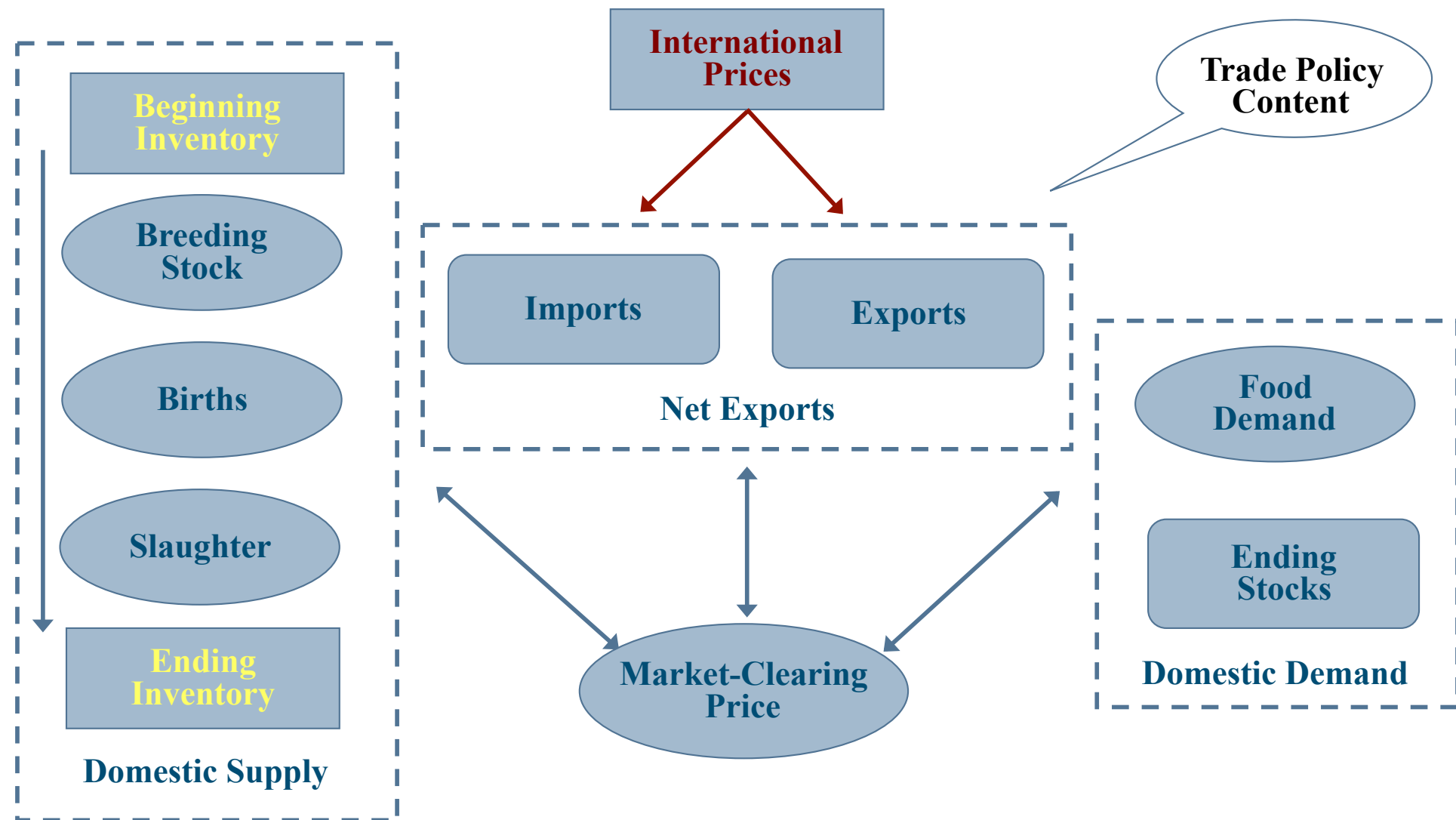
Basic Crop Sector Model



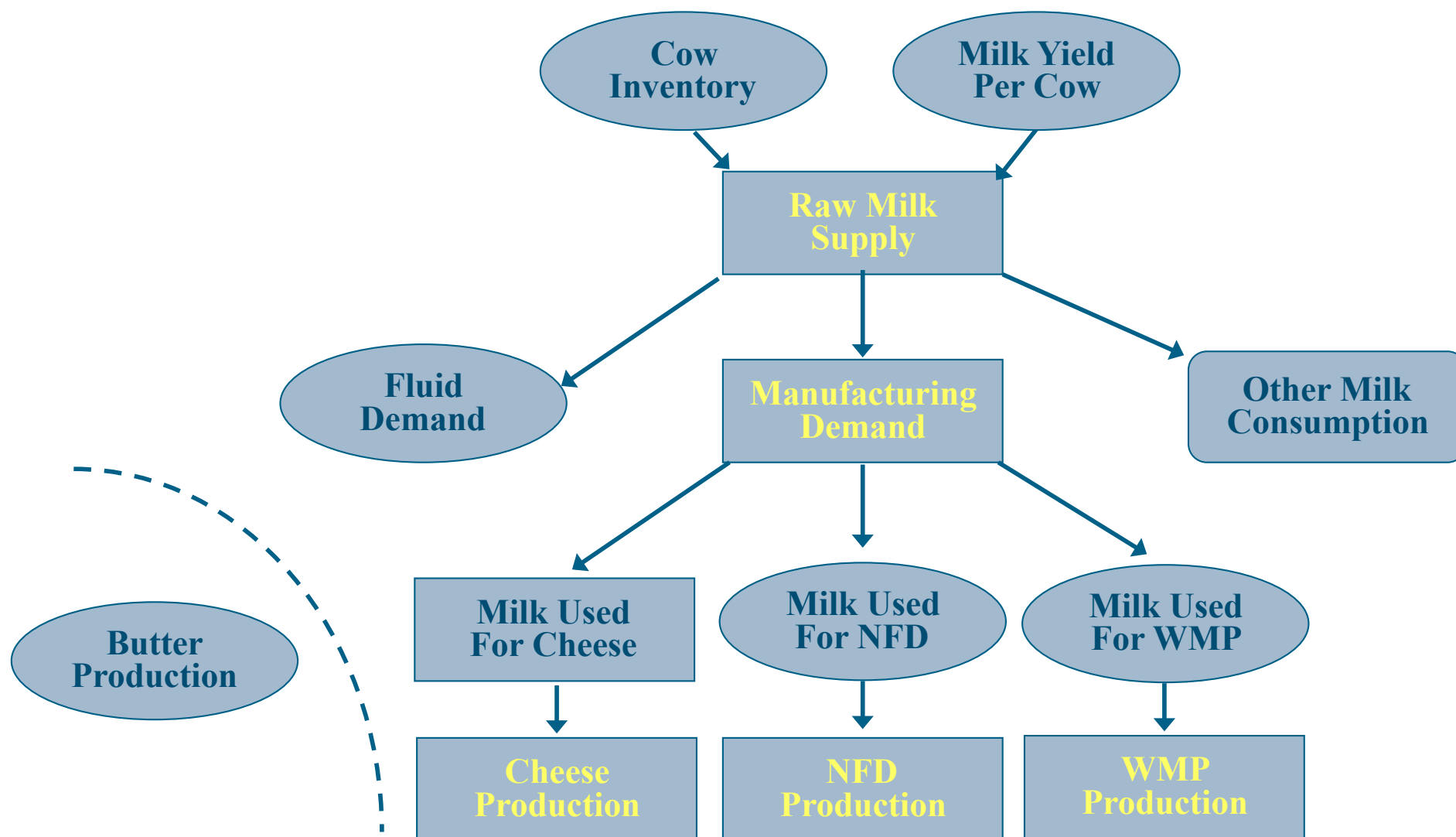
Derived Product Model: Oilseeds



Basic Livestock Sector Model



Dairy Product Supply





Crop Area Equations

- ❖ Crop Area = f (lagged area, lagged own gross returns, lagged cross gross returns)
- ❖ Crop Area = f (lagged area, lagged own prices, lagged cross prices)
- ❖ The crop models are linked through crop prices that are used in the area and demand (feed and non-feed) equations.



Feed Demand Equations

- ❖ Feed demand for grains and oilseeds are derived demand from livestock and dairy production.
 - Feed demand is an output-constant demand, which is a function of livestock and dairy numbers (as measured by aggregate livestock animal units), the price of feed products and the price of oilseed meal.
- ❖ The crop models provide prices for livestock and dairy models, which are used as feed costs.



Policies

- ❖ Agricultural and trade policies in each country are included in the model to the extent that they affect the supply and demand decisions of the economic agents.
 - Export taxes (Argentina, Russia, etc.)
 - Import tariffs
 - Tariff rate quotas (China etc.)
 - Intervention prices (EU-27)