EU BIO-FUEL – POTENTIAL CHANGES IN INTERNATIONAL RAPESEED TRADE FLOWS

GCIRC Technical Meeting **2013**

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Overview - changes in rapeseed/ canola trade flows

A market-driven approach

- Current EU rapeseed numbers
  - beneficiaries of the current EU biofuel policy framework
- Oilseed trade – world flow patterns
  - world oilseed market outlook
  - alternate destinations for Eastern European, Australian, Canadian, EU rapeseed
  - domestic EU vegetable oil usage
  - EU exports?

Assumptions

- EU bio-fuel program changes; all others remain constant
- About 10% of world vegetable oilseed production (158 million mt 2012/'13) is used for bio-diesel (16.5 million mt oil), 9.6 million mt of which is EU-27 produced
- Mercantile used 40% avg. rapeseed oil content for calculation purposes

Summary EU rapeseed usage

- Production:
  - EU produces an average rapeseed crop of 19.5 million mt
- Usage:
  - EU uses a total of close to 24 million mt annually of rapeseed for human consumption/bio-fuel/feed usage
    - An average of 6.9 million mt of rapeseed oil (17.9 mmt seed equivalent) is used for industrial use/ bio-diesel
    - An average of 2.6 million mt of rapeseed oil (6.1 mmt seed equivalent) is used for human consumption vegetable oil

  - Total vegetable oil usage for human consumption (all oils) in the EU is 12.7 million mt of oil
    - 19% of vegetable oil consumed is rapeseed oil

EU rapeseed – where does it originate

EU Rapeseed Origin

Crop Year	'000 tonnes	2010/11	2011/12	2012/13	Average
EU domestic seed production		**20,754**	**19,077**	**18,800**	**19,544**
Rapeseed imports		2,636	3,762	3,400	**3,266**
Oil imports - seed eqivalent		1,220	1,498	875	**1,198**

Third country imports = shortfall EU domestic rapeseed production: 4.5 million mt

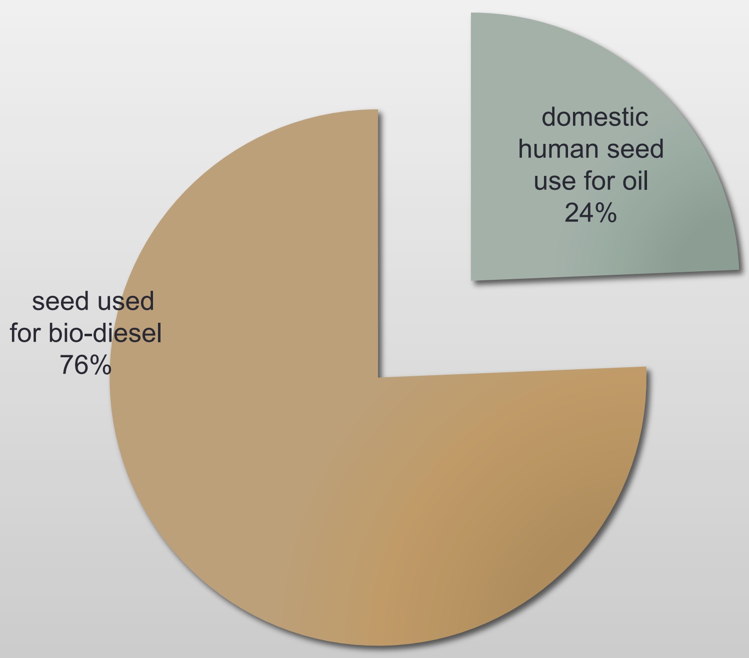
	'11/'12	'12/'13 (6 mos.)	avg. '06-'10
Ukraine:	29%	74%	61%
Australia:	55%	17%	26%
Canada:	8%		
Others:	7%	9%	13%

Russia, Kazakhstan, Belarus, Moldova

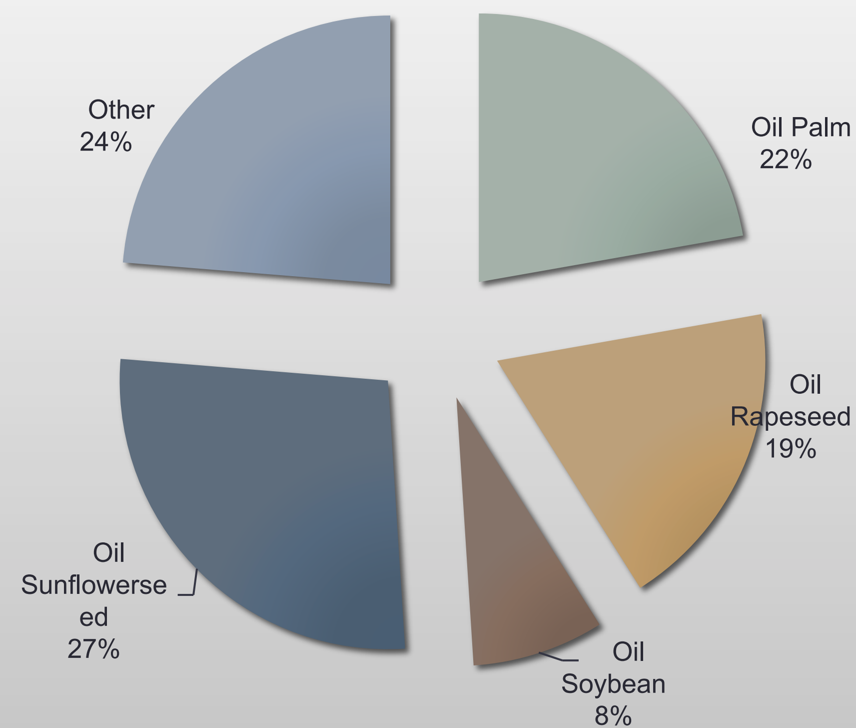
Source: Europ. Comm.

EU vegetable oil usage

EU Rapeseed Use for Crush, 3 yr. avg.



EU edible oil use by oilseed, 2012/'13



EU rapeseed – who benefits from the program

EU Rapeseed

Crop Year	'000 tonnes	2010/11	2011/12	2012/13	Average
Domestic seed production		**20,754**	**19,077**	**18,800**	19,544
Domestic human use seed equivalent for oil		6,700	5,743	5,925	6,123
Rapeseed receiving bio-subsidy		14,054	13,335	12,875	13,421
Third country benefits:					
Rapeseed import tonnage benefiting from bio-diesel program		**3,856**	**5,260**	**4,275**	4,464

- EU Bio-fuel program supports the import of the equivalent of 4.5 myn tonnes of foreign imports

These imports cost the EU about $2.6 billion (€2.1 billion) per annum plus bio-diesel incentives

Rapeseed meal

EU Rapeseed Meal

Crop Year	'000 tonnes	2010/11	2011/12	2012/13	Average
Meal domestic production		**12,533**	**12,136**	**12,455**	**12,375**
Imports		224	228	260	237
Total		12,757	12,364	12,715	12,612
Seed equivalent		**21,262**	**20,607**	**21,192**	**21,020**

All of the rapeseed meal produced in the EU is consumed domestically

In addition the EU imports 237,000 tonnes of rape meal (= 400,000 tonnes seed equivalent)

Rape meal equals about 40 percent of meal consumed in feeds

Consequences of current bio-diesel program to EU- Rapeseed

- Program attracts third country imports, costs $2.6 byn in program induced imports

- Canola seed in the EU is primarily used for industrial purposes
  - food for fuel argument
  - may have prevented European development of better quality oil for human use.

Observations:

- In North America canola oil is a preferred oil for human consumption. E.g., McDonalds N. America pays premium for canola oil over soya oil (CT with Cargill)

- In Canada canola represents 54 percent of total edible oil; in the EU 19 percent. There is room for additional human consumption; could replace EU-imported (sunflower) oil

POTENTIAL CHANGES IN TRADE FLOW PATTERNS

If EU bio-fuel production ceases

- Rapeseed seed imports are eliminated
- Meal imports will have to increase
- Can destinations other than the EU absorb an extra 4.5 million mt of rapeseed formerly exported to the EU?
- What happens to EU production if vegetable oil consumption preferences are not changed substantially? ~11 million tonnes rapeseed looking for new import destinations?

Alternate rapeseed markets?
General forecasts for world oilseed consumption:

- Economic growth and population increases in developing countries are projected to
  - boost demand for vegetable oils for food consumption and
  - for protein meals used in livestock production.

- With demand for vegetable oils increasing at a faster rate than for protein meals, prices rise more rapidly for vegetable oils than for oilseeds and protein meals, particularly for rapeseed oil compared with rapeseed meal.

Demand for vegetable oils rising…

Global consumption moves away from food staples, such as wheat and rice, toward higher value food, such as meat and vegetable oils

Commodity	Average annual global consumption growth, 2012-21	Commodity	Average annual global consumption growth, 2012-21
	Percent		*Percent*
Wheat	0.9	Corn	1.8
Rice	1.0	Oilseed meals	2.2
Beef, pork, poultry	2.2	Vegetable oils	2.7
Coarse grains	1.5	Cotton	1.7

Source: USDA, Economic Research Service calculations based on USDA's 2012 international baseline data, available at www.ers.usda.gov/data-products/international-baseline-data.aspx

General forecasts cont'd

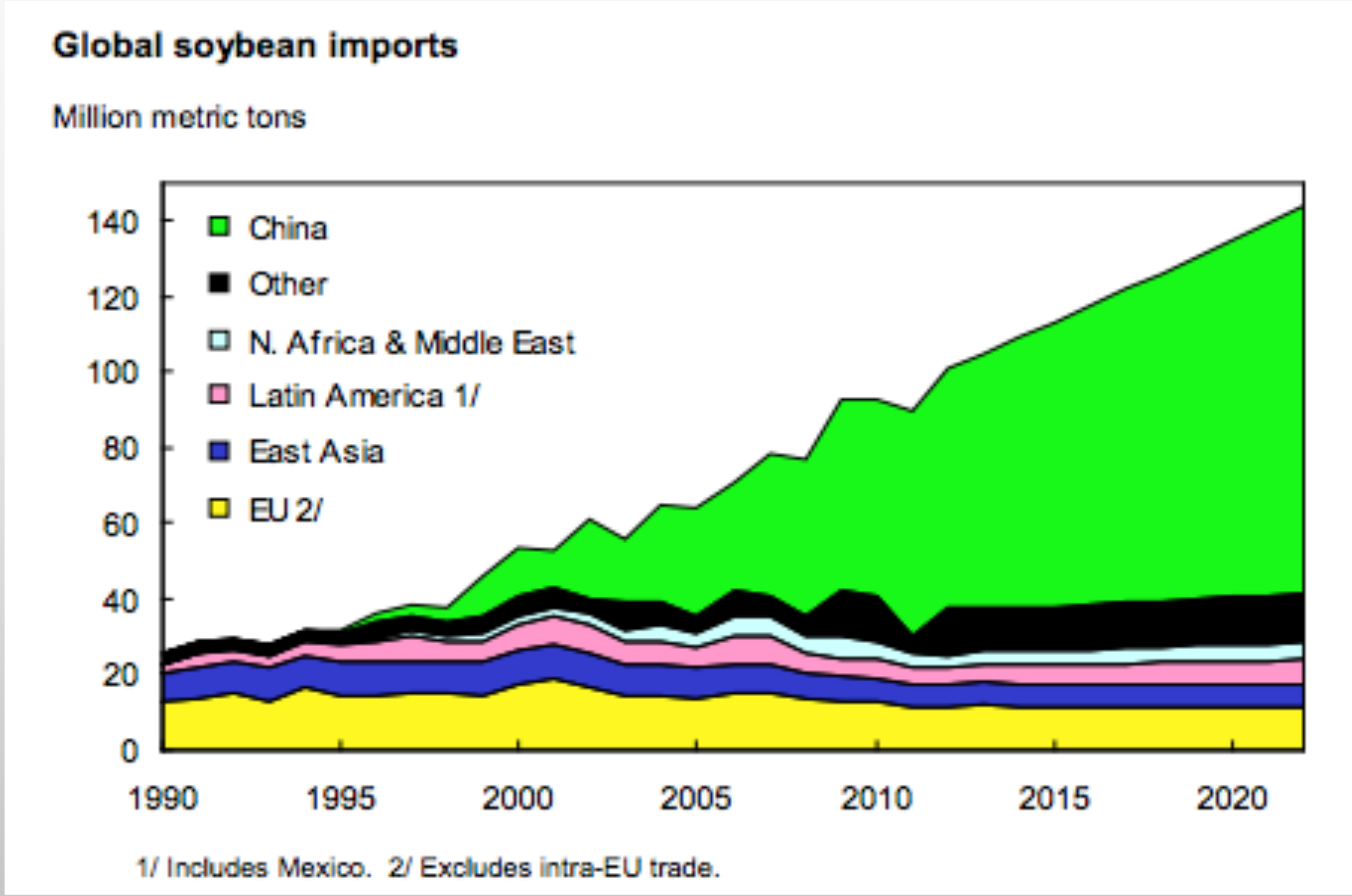
Specific destinations expected to expand oilseed production:

- China, some countries in North Africa, the Middle East, and South Asia
  - Their import demand for oilseeds has grown rapidly, this growth is projected to continue.
  - During the next decade, global soybean trade is projected to increase by 37 percent, soybean oil by 21 percent, and soybean meal by 19 percent.
  - All destinations have invested heavily in crushing capacity

China

- Per capita income is projected to continue rising rapidly, expanding consumer demand for livestock products and vegetable oils.
- Feed rations are expected to include an increasing percentage of protein meal to improve rates of weight gain for meat producing animals.

Oilseed destinations: Projection into 2022



Dominant types of vegetable oil used

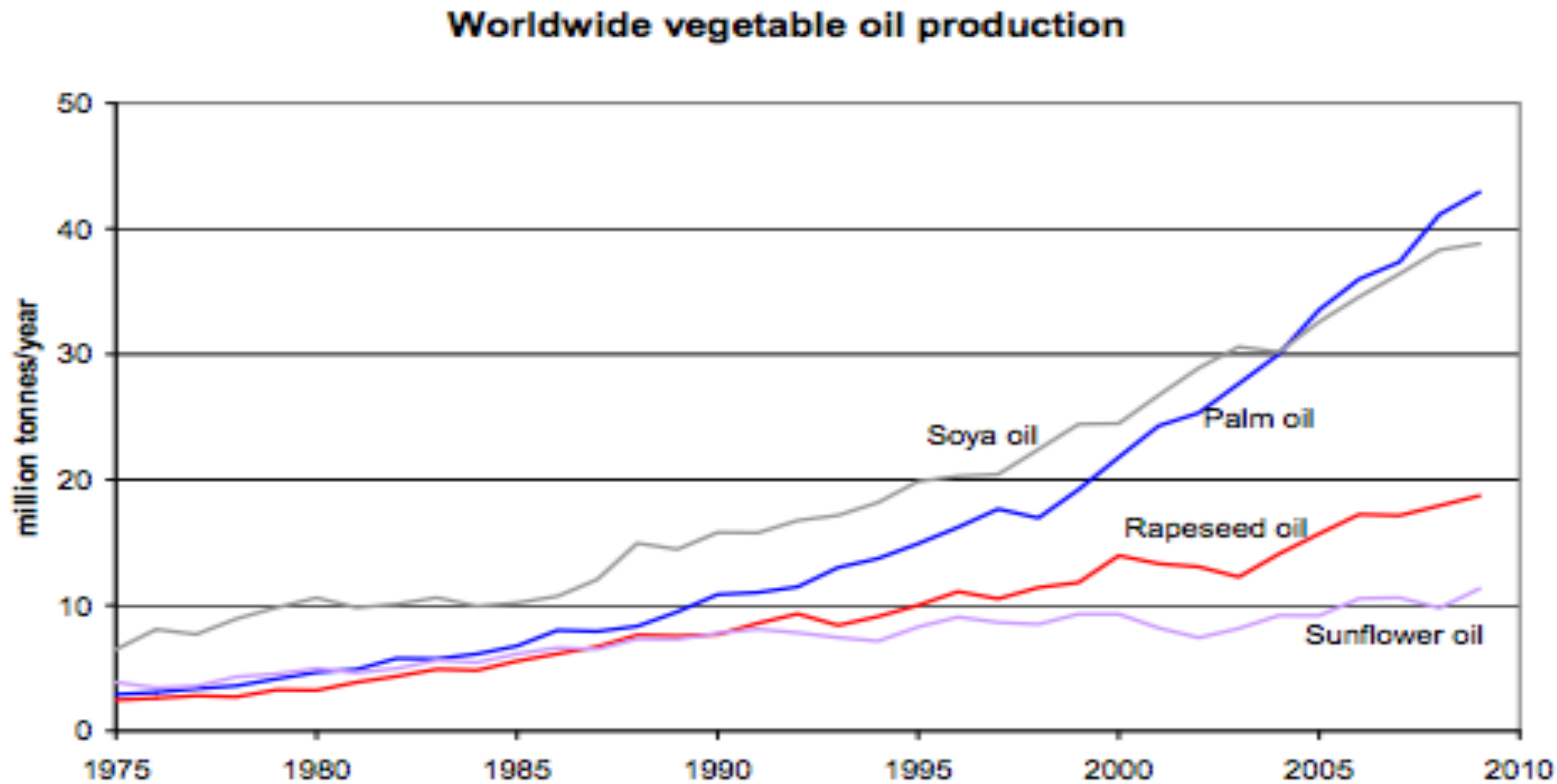


Figure 1.2 Annual growth of major edible oils production (palm, rapeseed, soy and sunflower oils)
Source of the data: www.fas.usda.gov/psdonline

Soybean trade projections

- increases rapeseed trade likely to follow same pattern to China

World soybean trade is projected to rise rapidly during the next 10 years (but at a slower pace than in recent years), climbing nearly 39 million tons (38.5 %), to 135.1 million tonnes by 2020/'21.

- China's soybean imports have risen sharply; account for 56% of world trade.
  - China will face policy decisions regarding the tradeoffs between producing and importing corn and soybeans.
  - China's soybean imports are projected to rise 50 % to 95 million tonnes in 2020/21 and to account for 90 percent of the projected growth in global soybean imports.
- Effect on canola/ rapeseed imports…
- China buys 2-2.8 million mt of canola seed plus 1 million mt of canola oil from Canada

Other oilseeds destinations:

- East Asia (Japan, South Korea, and Taiwan)
  - influenced by a continuing shift from importing feedstuffs to importing meat and other livestock products
- Egypt
  - projected to increase soybean imports in an effort to improve feed rations and to meet increased per capita demand for vegetable oil consumption.
- North Africa and Middle East region
  - limited ability to expand their own soybean production; they increase imports to fill their growing feed and food needs.
- Mexico's soybean imports (also buy~1.3 million mt canola from Canada)
  - projected to increase 21 percent to 4.5 million tons; these imports will support the production of soybean meal for the Mexican poultry and pork industries, and of soybean oil for domestic food consumption.

Long term projections: Import destinations
(USDA based)

Soybean trade long-term projections

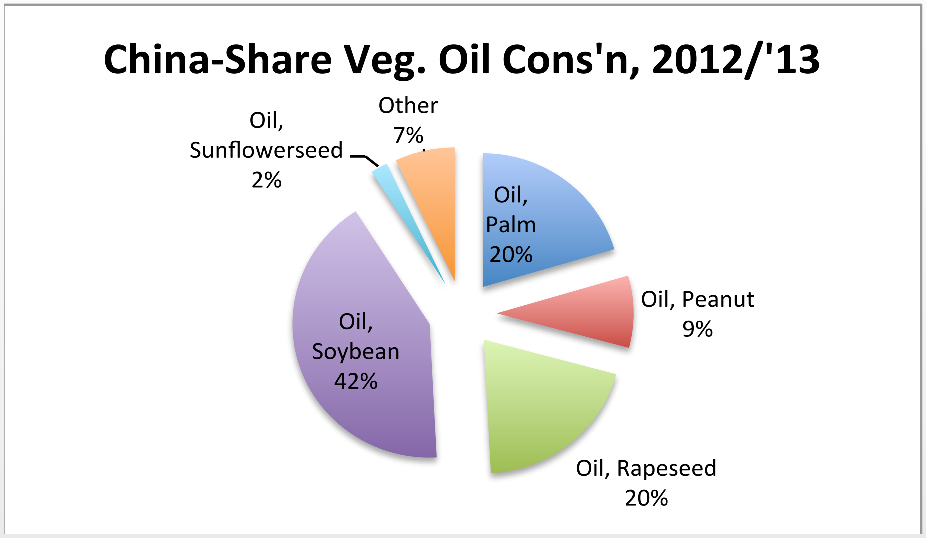
Importers	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
	Imports, million metric tons									
European Union 1/	11.3	11.0	11.7	11.2	11.2	11.2	11.2	11.2	11.3	11.3
Japan	2.8	2.6	2.6	2.6	2.6	2.6	2.7	2.7	2.7	2.7
South Korea	1.1	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Taiwan	2.3	2.3	2.3	2.2	2.3	2.3	2.3	2.3	2.3	2.3
Mexico	3.4	3.4	3.7	3.8	3.8	3.9	4.0	4.1	4.2	4.3
Former Soviet Union 2/	0.7	0.8	1.1	1.2	1.3	1.4	1.4	1.3	1.3	1.2
N. Africa & Middle East	3.5	3.5	3.8	3.8	3.9	4.0	4.1	4.2	4.3	4.4
China	59.2	63.0	67.6	71.6	75.2	79.0	82.8	86.7	90.6	94.7
Malaysia	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7
Indonesia	2.0	2.0	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.3
Other	2.5	10.6	8.4	8.7	8.9	9.1	9.4	9.6	9.8	10.0
Total imports	89.3	100.9	105.0	109.0	113.2	117.6	121.9	126.2	130.6	135.1
China percent of total world	66%	62%	64%	66%	66%	67%	68%	69%	69%	70%

China-Share of vegetable oil consumption, 2012/'13

Seed equivalence Chinese rapeseed oil consumption 2012/'13:
15.4 million tonnes

If increased by 50% by 2020/'21:
23.1 million tonnes

[we think USDA rapeseed oil consumption number is underestimated]



China Oilseeds and Products Supply and Distribution ('000 mt)

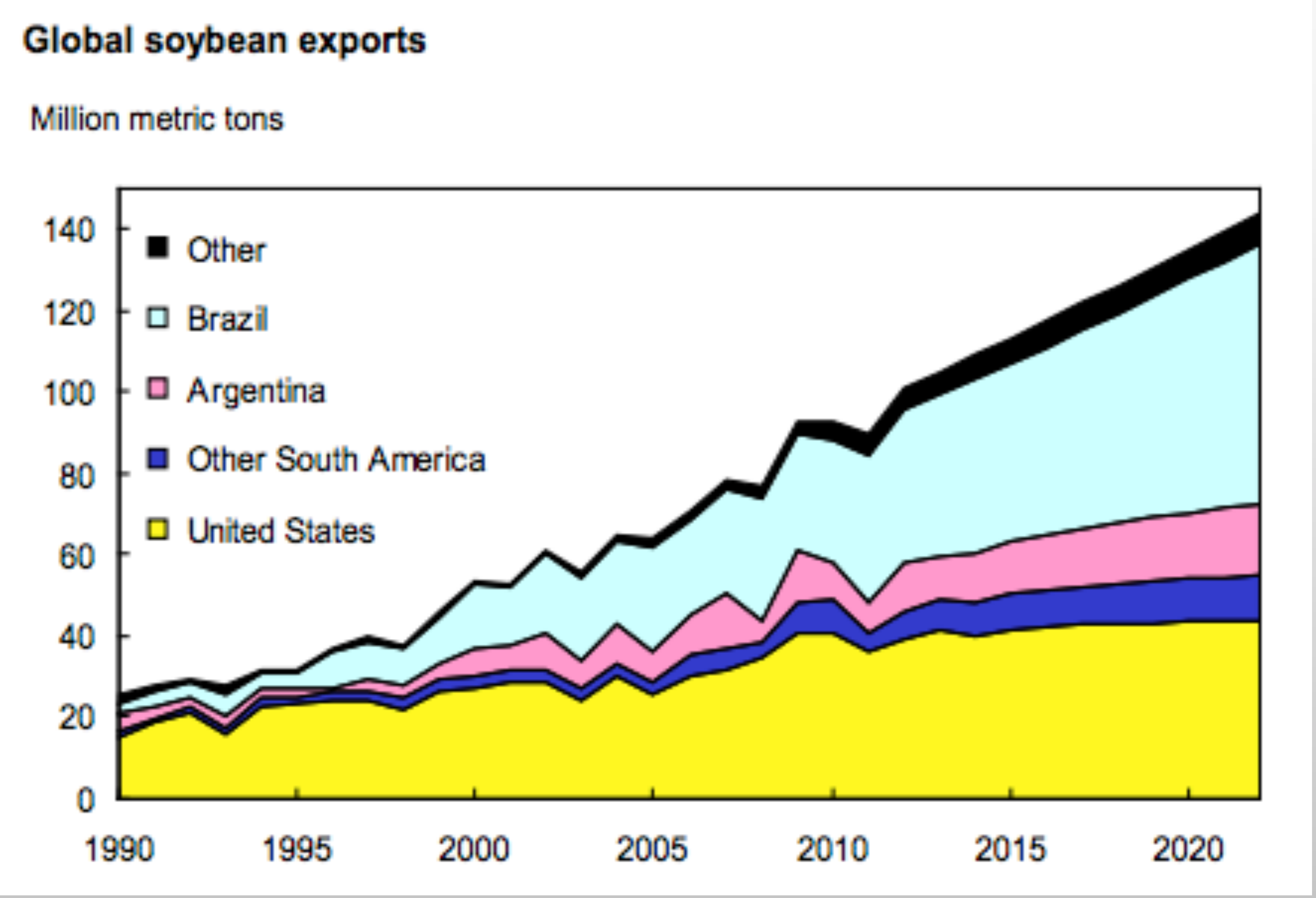
	2008/09	2009/'10	2010/'11	2011/'12	Mar 2012/13	Apr 2012/13
Production						
Oilseed, Peanut	14,286	14,708	15,644	16,046	16,500	16,500
Oilseed, Rapese	12,100	13,657	13,100	13,426	13,500	13,500
Oilseed, Soybea	15,540	14,980	15,100	14,480	12,600	12,600
Oilseed, Sunflow	1,790	1,956	2,300	2,316	2,250	2,400
Other	14,400	12,540	11,953	12,972	13,720	13,720
Total	**58,116**	**57,841**	**58,097**	**59,240**	**58,570**	**58,720**
Domestic Consumption						
Oil, Palm	5,618	5,930	5,797	5,841	6,300	6,300
Oil, Peanut	2,184	2,227	2,432	2,585	2,676	2,686
Oil, Rapeseed	4,853	5,641	5,965	6,255	6,167	6,167
Oil, Soybean	9,486	10,435	11,109	11,944	12,870	12,870
Oil, Sunflowerse	439	493	362	469	584	618
Other	2,158	2,188	2,026	2,144	2,173	2,173
Total	**24,738**	**26,914**	**27,691**	**29,238**	**30,770**	**30,814**

Long term export projections: Export nations

(USDA based)

Exporters	Exports, million metric tons									
	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
Argentina	7.4	12.0	10.9	12.2	13.1	13.7	14.2	15.0	15.7	16.2
Brazil	36.3	37.4	39.4	42.3	43.8	46.2	48.9	51.3	54.4	57.6
Other South America	4.7	7.3	7.8	8.1	8.5	8.9	9.3	9.7	10.1	10.5
South America Total	48.4	56.7	58.0	62.7	65.4	68.7	72.4	76.0	80.2	84.3
Ukraine	**1.3**	**1.8**	**1.9**	**2.1**	**2.2**	**2.4**	**2.5**	**2.7**	**2.8**	**2.9**
Other foreign	**3.5**	**3.4**	**3.9**	**3.9**	**4.0**	**4.1**	**4.1**	**4.2**	**4.3**	**4.4**
United States	36.1	38.9	41.2	40.3	41.6	42.5	42.9	43.3	43.3	43.5
Total exports	89.3	100.9	105.0	109.0	113.2	117.6	121.9	126.2	130.6	135.1
S.America mkt share	54%	56%	55%	58%	58%	58%	59%	60%	61%	62%

Oilseeds exporters: Projection to 2022



CURRENT RAPESEED EXPORTERS TO EU

What will happen with change in bio-fuel PGM?

Canola/ rapeseed export matrix ('11/'12)

	Australia	Canada	Ukraine	World
Japan	50	2,000	-	2,050
Pakistan	-	1,050	-	1,050
EU-27	1,560	200	1,300	3,060
United Arab Emirates	50	550	100	700
Bangladesh	-	150	-	150
China	-	1,500	-	1,500
United States	-	550	-	550
Mexico	-	1,000	-	1,155
Turkey	-	-	150	150
Others	-	-	-	360
Interstate	-	-	-	-
World	1,660	7,000	1,550	10,725

Australia to China

- Australia was shut out of the Chinese market in 2009, when China barred Australian canola imports due to concerns over blackleg.
- Since the ban was lifted in March 2013, China has already purchased 300,000 mt of Australian canola.

> "China has been increasing their canola imports year on year, importing 2.6mmt of canola from Canada in the 2011-12 season. This year estimates are already at 2.8mmt. Canola imports into China are expected to continue increasing due to the construction of new canola crushing plants with the increase in crushing capacity causing a shift in imports from canola oil and meal to canola."
>
> March 14 CBH announcement

Canadian canola seed exports by destination

EXPORTS BY DESTINATION	99/00	00/01	01/02	02/03	03/04	04/05	05/06	06/07	07/08	08/09	09/10	10/11	11/12	/13 Expect
CONTINENTAL EUROPE	2	0	2	1	0	0	0	0	0	0	95	289	214	50
EASTERN EUROPE	0	0	0	0	0	0	54	29	52	0	0	0	0	0
DUBAI	0	0	0	0	0	0	182	282	348	530	458	819	730	400
MOROCCO/ALGERIA	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BANGLADESH	0	0	0	13	11	6	103	94	96	129	115	92	201	100
INDIA	0	0	0	0	0	11	0	0	0	0	0	5	0	0
JAPAN	1,823	1,854	1,611	1,562	1,675	1,746	1,955	1,961	2,131	2,065	2,039	2,336	2,125	2350
SOUTH KOREA	0	0	0	0	0	0	0	0	0	0	0	0	0	29
AUSTRALIA	0	0	0	0	0	0	0	57	0	0	0	0	0	0
BRAZIL	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MEXICO	570	868	610	450	1,068	944	1,274	900	1,231	1,163	1,249	1,404	1,300	1300
USA	288	253	106	195	317	430	617	670	920	764	608	467	730	450
PRC	1,211	1,890	193	0	401	275	614	916	660	2,872	2,250	917	2,500	2000
PAKISTAN	0	0	0	173	274	0	590	549	223	385	313	839	625	100
OTHERS	0	0	0	0	8	0	20	20	0	0	0	16	0	200
TOTAL	3,894	4,865	2,521	2,394	3,755	3,412	5,409	5,477	5,661	7,908	7,127	7,184	8,425	6929

Canadian canola oil exports

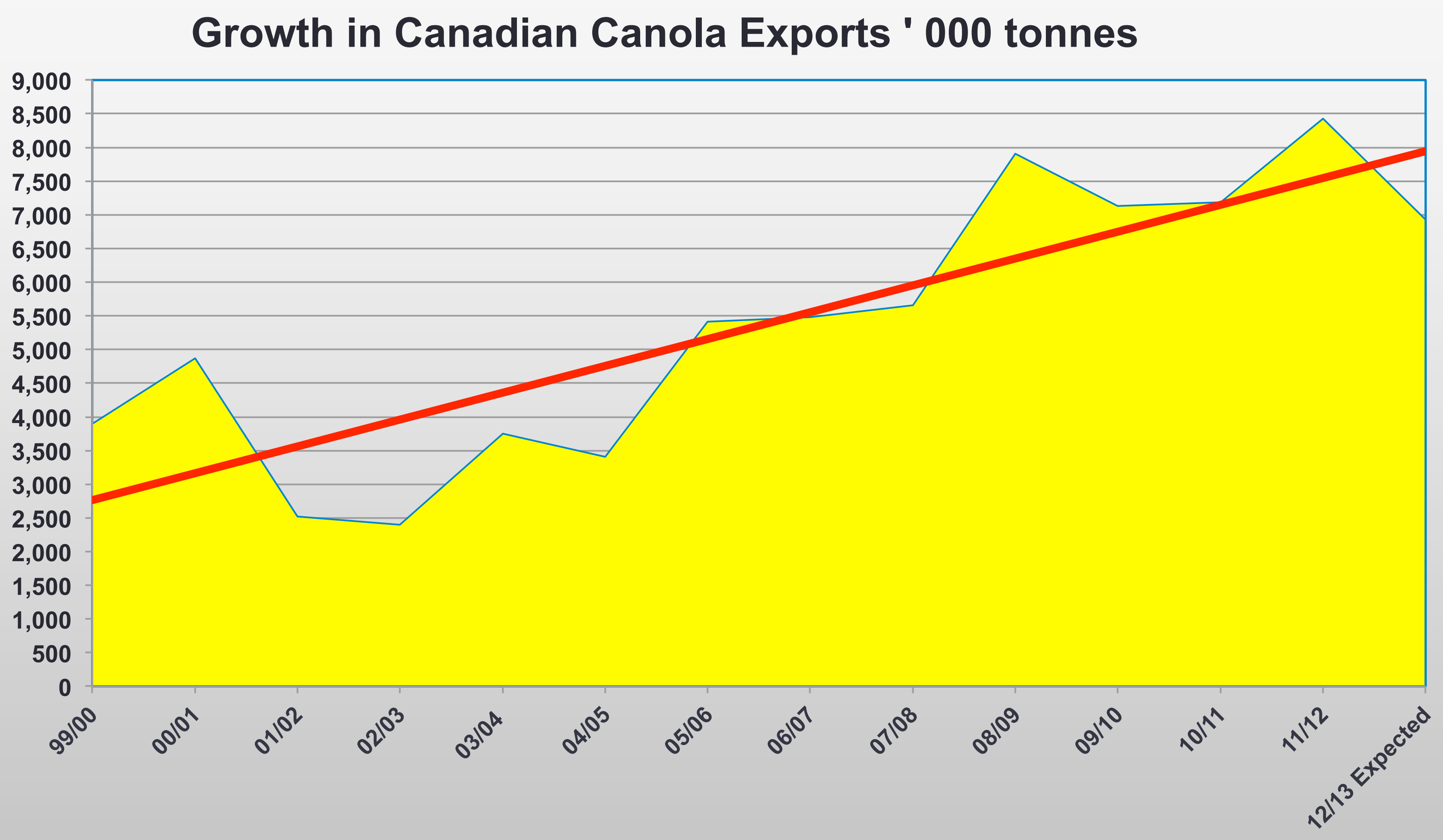
Canandian Canola Oil Exports (Updated March 18, 2013)

	2012 AUG	2012 SEP	2012 OCT	2012 NOV	2012 DEC	2012 Cal. Year	2013 JAN	Crop YTD
China	79	131	105	87	135	**1003.6**	70	**606.1**
Columbia	0	1	0	0	0	**3.5**	0	**1.8**
EU-27	0	0	0	0	0	**30.7**	0	**0**
Hong Kong	0	4	7	1	0	**36.7**	0	**12.4**
India	0	0	0	0	0	**16.3**	0	**0.2**
Iraq	0	0	0	0	0	**0**	0	**0**
Japan	2	1	1	1	2	**18.1**	2	**9.4**
Malaysia	0	0	0	0	2	**23.8**	0	**1.7**
S. Korea	1	12	6	2	4	**55.7**	2	**27**
Taiwan	0	0	0	3	2	**14.5**	2	**7.4**
U.S.A.	110	92	115	104	110	**1396.8**	104	**635.3**
Others	1	9	1	0	9	**64.6**	11	**31.3**
TOTAL	**194.5**	**249.7**	**235.7**	**197.5**	**263.6**	**2664.3**	**191.7**	**1332.8**

* Monthly totals may be off due to rounding.

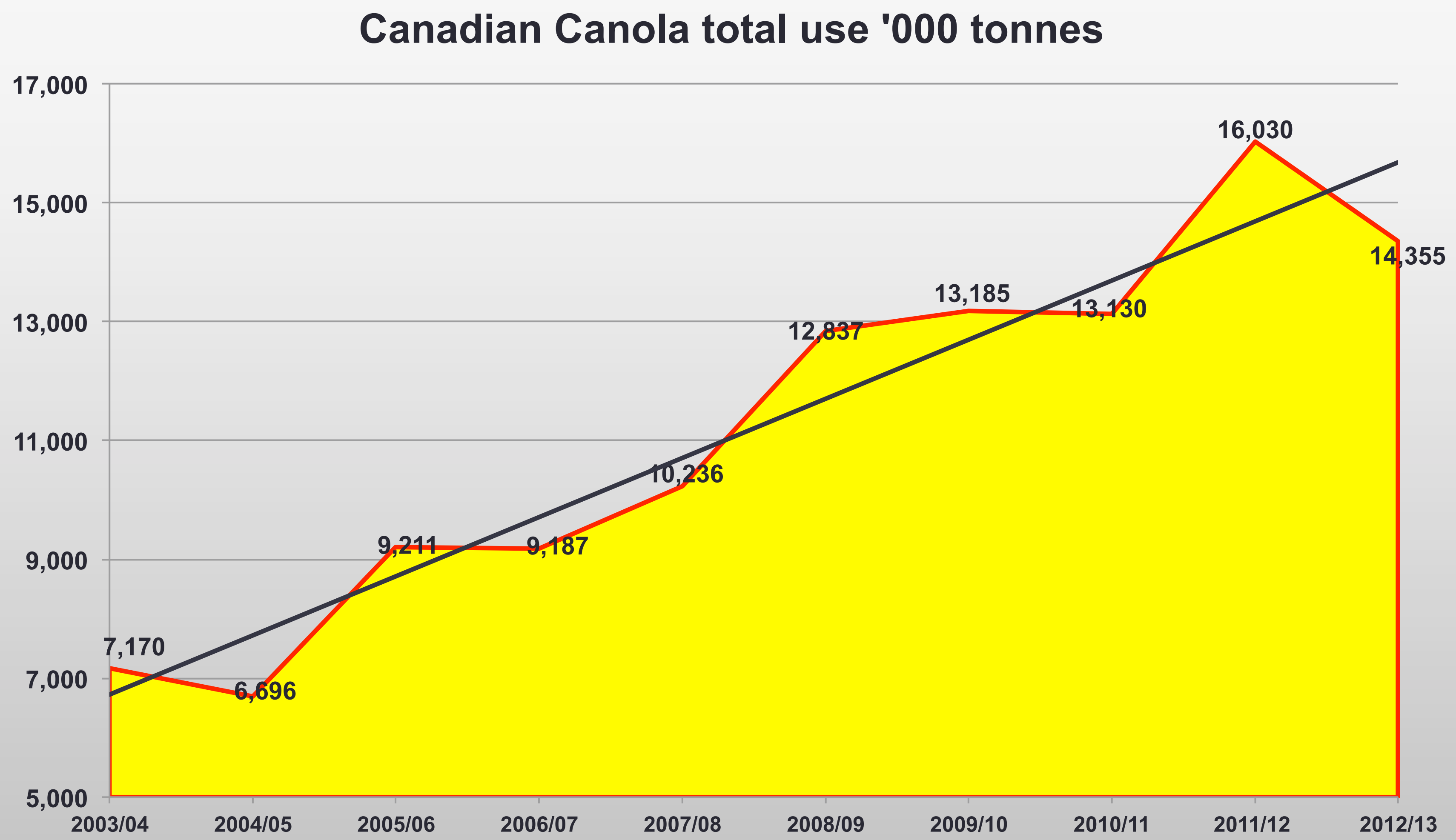
Growth Canadian canola exports, 1999-2013

(… with very small exports to the EU)



Canada-total canola usage, 2003-2013

(domestic crush increased to 7 million mt)



Ukraine: Top 12 buyers of rapeseed

Rapeseed Exports from Ukraine by Destination, MY, 1000 MT (HS 1205)

Destination	July 07-June 08	July 08-June 09	July 09-June 10	% Change MY 2009/10 to MY 2009/08
World	906.2	2636.5	1788.9	-32.1
Netherlands	100.6	700.6	469.3	-33.0
Belgium	24.8	431.4	347.9	-19.4
France	137.4	386.2	291.8	-24.5
Turkey	140.8	126.8	157.1	23.9
Poland	12.4	237.7	134.5	-43.4
United Arab Emirates	49.4	12.9	122.0	849.1
Lithuania	0.0	53.6	58.3	8.9
United Kingdom	5.5	11.2	42.0	273.8
Portugal	59.6	44.2	36.7	-16.9
Israel	15.6	27.6	24.1	-12.4
Pakistan	252.1	98.6	17.6	-82.1
India	10.2	26.2	13.8	-47.2

Sailing times to India, China, EU

[basis 14 knots vessel speed] **Country of Origin**	**Port of Loading**	**Port of Discharge**	**Distance (nautical miles)**	**Sailing Time**
CANADA	Vancouver,CA	Mumbai/Nhava Sheva, IN	9,507	28 days 7 hrs.
	Vancouver,CA	Chennai, IN	8,660	25 days 19 hrs.
	Vancouver,CA	Kolkata/ Haldia, IN	8,664	25 days 19 hrs.
	Vancouver,CA	Dalian, CN	5,170	15 days 9 hrs.
	Vancouver,CA	Shanghai, CN	5,103	15 days 5 hrs.
	Montreal, CA	Shanghai, CN	11,492	34 days 5 hrs.
	Vancouver, CA	Valencia, ES	8,803	26 days 5 hrs.
	Vancouver, CA	Gijon. ES	8,466	25 days 5 hrs.
	Montreal, CA	Valencia, ES	3,549	10 days 14 hrs.
BLACK SEA	Novorossiysk, RU*	Mumbai/Nhava Sheva, IN	4,291	12 days 19 hrs.
	Novorossiysk, RU	Chennai, IN	4,956	14 days 18 hrs.
	Novorossiysk, RU	Kolkata/ Haldia, IN	4,627	16 days 18 hrs.
	Novorossiysk, RU	Dalian, CN	8,844	26 days 8 hrs.
	Novorossiysk, RU	Shanghai, CN	8,395	24 days 24 hrs.
	Novorossiysk, RU	Valencia, ES	1,997	5 days 23 hrs.
BALTIC	St. Petersburg, RU	Gijon. ES	1,743	5 days 5 hrs.

EU rapeseed/ rapeseed oil industry?

(if EU does not increase rapeseed edible oil consumption significantly)

EU rapeseed production

- as wheat prices dropped, rapeseed has become more valuable crop
- rapeseed should stay in rotation

EU rapeseed oil

- EU has oilseed crush capacity (37 million mt acc. to Fedoil)
- EU vegetable oil for food rather than vegetable oil for fuel
- China needs additional oil
  - Expected required increase in oilseed supplies: South America
    - expansion Amazon areas (=problem)
    - or: additional acres Western Brazil (higher transportation to port)

Vegetable oils in the EU – domestic solution

- Total vegetable oil (all oil crops) used for human consumption in the EU is 12.7 million mt oil
- Of that an average of 2.6 million mt is rape oil (5.9 million mt seed equivalent) used for human consumption, or 19% of total

EU vegetable oil consumption from rapeseed:

- Currently: at 2.4 million mt oil (19% of total veg. oil cons'n)
- Increase: to 9.3 million mt oil (74% of total veg. oil cons'n); would use all rapeseed oil currently produced in the EU
- Rapeseed production exclusive for food, not for fuel

- Note: In Canada, canola oil was 54.1% ('11/12) of total vegetable oil consumption

Would the EU be an exporter with changes to the bio-fuel framework?

- Expect the EU to largely maintain rapeseed production even without energy incentive
- Efforts to increase edible rapeseed oil consumption will be helpful, but not sufficient as a solution
- Expect the EU to become an *exporter of vegetable 'oil'*

Price effects – international markets

- Minimal as the oilseed market is primarily determined by soybean balance sheets
- Example:

canola Newcrop November 2013 compared to soybeans

Newcrop Canola value compared to soybeans						Board Crush margin	product value	
	Valu	futs per tonne	CrushYield	soybeans	Canola product ratio		Canola	Soybean
soyameal		$338.00	80.00%	$270.40		meal		$270.40
Canola meal valu compare 48% SBM	55%	$185.90	57.00%		$105.96	meal	$105.96	
	Futures							
soyoil	$0.4900	$1,080.25	18.30%	$197.69		oil		$197.69
canola oil		$1,080.25	44.40%		$479.63	oil	$479.63	
Gross value				$468.09	$585.60	total	$585.60	$468.09
						Minus seed cost	$557.00	$453.18
Newcrop Product premium canola over soybeans					1.2510	*Crush margin USFMT	$28.60	$14.91
Current Mkt premium canola over beans					1.21717	Per Bushel	$0.65	$0.41
Ratio canola over/under valued agst. Soybeans					-3%	Oil Share		43.62%
		Futs	FOB Prems	Usfmt	Ratio Soya/canola	Beans more attractive		
Beans fob Pacific North West		$12.33	$1.20	$497.28	1.2172	to china due hi meal prices		
Canola fob Vancouver		$557.00	$60.00	$605.28				
Exchange Cdn. Dollar	.		$0.98100		variables	source Mercantile		07/04/2013

Projected rapeseed export matrix ('15/'16)

Projected rapeseed imports by China for 2015/'16:
7 mmt

Projected soybean imports by China for 2015/'16:
95 mmt

Importers

Exporters

('000 mt)	Canada	Australia	Ukraine	EU-27 (oil equiv.)	World
Japan	2,400	50			2,450
Pakistan	200	50	50		300
EU-27					0
UAE	200	50	50		300
Bangladesh	100	50	50		200
China	2,500	1,500	500	2,500	7,000
USA	500				500
Mexico	1,500				1,500
Turkey			200		200
others	200		100		300
Total	7,600	1,700	950	2,500	12,750

Conclusions

- The biggest (and growing) oilseed market in the world, China, will absorb the majority of the ‘displaced’ rapeseed
  - Especially Australia will have no problem switching destinations
  - The Ukraine will also access alternate rapeseed markets
- We expect the EU to switch to exporting rapeseed oil into the Asian markets fairly quickly because EU’s existing crushing capacity – the precedent exists
- Given the assumptions about the demand growth rates in China, we anticipate the medium term (2-3 yrs) price effects on the international rapeseed markets to be muted because of the dominance/ lead role of soybeans in the market.

EU historic rapeseed exports

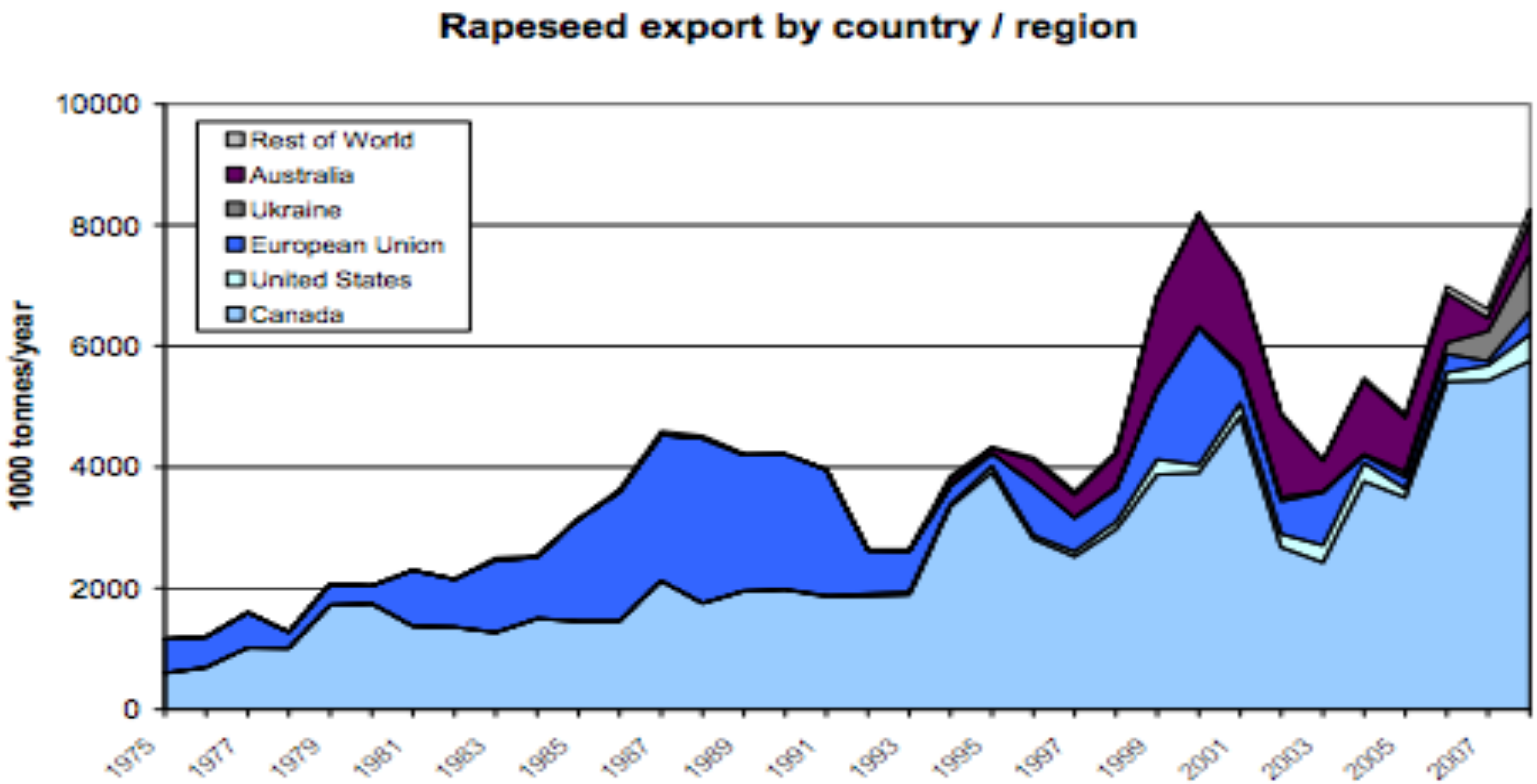


Figure 2.12 World rapeseed exports, 1975 – 2007.
Source of the data: www.fas.usda.gov/psdonline ; mind the different scale from production graph.

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Questions

- markets
- export destinations

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