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Bangladesh

Oilseeds and Products Annual

2017

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Report Highlights:
Assuming a normal winter and mid-summer season (Jan-May), Bangladesh's soybean production is expected to rise 1.96 percent to 156 thousand tons in MY 2017/18 (Jul-Jun). Competitive global market prices for soybeans will likely induce imports to increase soybean crush and raise total oil meal production to 1.02 MMT, an increase of 8.5 percent in MY 2017/18. Edible vegetable oil production and consumption are expected to increase to 235 thousand tons and 2.4 million tons, respectively. Imports will increase to reach 2.2 million tons in MY 2017/18.

Commodities:
Oilseed, Soybean

Production:

Given normal weather conditions, soybean production is expected to increase 1.96 percent to 156 thousand MT in MY 2017/18 (Jul-Jun). Greater farmer interest in planting soybeans will drive an increase in planted area of 1.23 percent, to a total of 82 thousand hectares in MY 2017/18. Soybeans for the MY 2016/17 were planted in January and will be harvested by May. That harvest is forecast to be 153 thousand MT.

Among oilseeds in Bangladesh, in FY 2015-16 soybeans are the fourth crop in terms of total planted area at 9% of total oilseed planted area; mustard dominates with 68%, followed by sesame, groundnuts and others (sunflower, linseed) at 12%, 10% and 1% respectively. About 70 percent of soybean farmers are cultivating variety "*Shohag*", which was officially released in 1990; its average yield is 1.8-2 ton per hectare. Bangladesh Agricultural Research Institute (BARI) developed variety BARI Soybean-5 and BARI Soybean-6 which is planted by some 30 percent of soybean farmers. These high yield BARI varieties are popular, but supply constraints limit their impact in the field and overall yields remain flat, which in turn hinders growth of this subsector.

Poor soil and competing crops limit area available for soybean cultivation. Soybean competes with crops like winter rice (*Boro* season rice) and ground nut in the river basin islands (charland) of the southern coastal part of the country. Charland is available for soybean cultivation because poor irrigation facilities and increasing salinity in the late winter and summer season make charland unsuitable for *Boro* season rice production. Soybean cultivation in general requires less irrigation and less fertilizer. The lower production costs coupled with good market prices give farmers a premium for soybeans and ground nuts compared to *Boro* rice. A recent study showed that return on investment for soybean cultivation is as high as 43%, compared with 26% for ground nuts and just 4% for *Boro* rice.

It was stated above that just 9% of planted crop area in Bangladesh is soybean, whereas nearly 70% is mustard. That in large part reflects the priorities of the Bangladesh Agricultural Research Institute (BARI) and Bangladesh Institute of Nuclear Agricultural (BINA), which are funded by the government of Bangladesh. These institutes' current research efforts for soybean are just 10% of total oilseed research, compared with 70% for mustard.

Palm cultivation for commercial use is yet to start. Some farmers are trying to raise palm at a non-commercial scale, but palm production does not receive the support of Bangladesh extension services.

Consumption:

Soybean consumption as a grain or any other non-oil form is expected to rise marginally to 6 thousand MT in MY 2017/18 driven by increased production of various soy-based processed foods like soy flower, tofu and changing consumer behaviour in relation to more health consciousness.

Trade:

Soybean imports in MY 2017/18 are projected to rise 2.17% percent to 1.17 MMT due to increased demand both for raw materials used in animal feed and for soybean oil used in consumer products. In MY 2016/17, imports are expected to rise to 1.15 MMT on strong demand in the crushing industry. In the budget FY 2016/17, the government of Bangladesh increased tariffs on soymeal to 5 percent, which favored crushing of whole beans in Bangladesh to avoid tariffs.

Commodities:
Meal, Soybean

Production:

Strong soybean imports and domestic production have enabled soybean crushing plants to increase soymeal production. The surge of soybean imports pushed soymeal production to 940 thousand MT in MY 2016/17. In MY 2017/18, soymeal production is projected to increase 8.5 percent to 1.02 MMT as driven by increased demand in the feed industry. Since 100 percent of imported soybean is crushed to produce meal and oil, the surge in imports of soybean largely displaced imports of soymeal. The two major oilseed crushing plants in Bangladesh have estimated capacity of total 7000 MT/day, and they have facility to crush soybean, mustard and rapeseed. Sources indicate that the tariff on soymeal will likely lead to the establishment of three more crushing plants soon.

Consumption:

The growing poultry, cattle, and aqua industry's demand for feed has induced more soymeal consumption and is estimated to raise total feed usage to 1.2 MMT in MY 2016/17. Assuming a normal pace on feed consumption in the poultry, aqua and livestock sector in MY 2017/18, total feed usage is projected to grow 8 percent to 1.3 MMT. The investment in the poultry sector is increasing as the sector ramps up to reach capacities needed to drive exports.

Industry reports indicate that total poultry farms of all sizes number about 65-70 thousand and are growing at the rate of 15% per year. Aqua culture farms number about 2 million and the area under production (metric tons per hectare) is increasing at 5.7% per year. A total of 100 fully automated feed mills, and 45 small and medium feed mills, produce 7.26 MMT of feed for the livestock sector, including poultry (3.61 MMT), cattle (2.22 MMT), and aqua culture (1.43 MMT).

Raw materials used for poultry feed production include maize (55-65 percent), soybean meal (20-25 percent), mustard oil cake (10-25 percent), rice bran (rice by product) (10-20 percent), and meat and bone meal (10-20 percent). According to the report, demand for soybean in poultry feed is estimated at 0.94 - 1.13 MMT in CY 2015 (See Table 10).

Trade:

Imports of soybean for crushing in country as well as increased domestic soybean production will drive down soymeal imports by a projected 7.14 percent to 325 thousand MT in MY 2017/18. For the same reasons, soymeal imports are estimated to be down to 350 thousand MT in MY 2016/17.

Commodities:

Oil, Soybean

Oil, Palm

Production:

Human consumption and feed mill industry use as raw materials will drive oil production to an estimated 220 thousand MT in MY 2016/17. And for MY 2017/18, projected increases in soybean production and imports will drive total soybean oil production to rise 6.8 percent to 235 thousand MT. One study reported that in Bangladesh 80 oil refineries have total production capacity of 2.9 million MT but they are utilizing only 48% of production capacity. The excess capacity is available to supply the growing demand for edible oil.

Consumption:

Total edible oil consumption is forecast to rise 2.7 percent to 2.4 MMT in MY 2017/18 owing to increased population, rising income levels, changing consumer behavior, and increasing oil use as an ingredient in various feeds. Palm oil will constitute 1.5 MMT of consumption; soy oil, 0.9 MMT. Other minor edible oils such as mustard/rapeseed oil, rice bran oil, sesame oil, sunflower oil are not included in this report.

Per capita consumption of edible oil is 11.25 kg per year. Most households prefer soybean oil for cooking purposes, but such oil is often blended with palm oil. Edible oils sold in bulk constitute 75% of the market, a segment in which palm oil dominates, while soybean oil is the dominant oil in the bottled vegetable oil market.

Besides general cooking purposes, palm oil is also the dominant oil for food processing industries (13%) and shortening/Vanaspati (fully or partially hydrogenated vegetable cooking oil) industries (20%); it is also used in the paint industry. Increases in fast food consumption as well as higher incomes in rural areas have driven consumption of palm-soy oil mixes as well.

On March 02, 2017, wholesale prices for bulk soybean oil were BDT 90 - 91 ($1.12 – 1.13) per liter; bulk retail soybean oil was selling for BDT 95- 96; super-palm (palmolein) was selling for BDT 76 - 80 per liter.

Trade:

The import pace for edible oils in MY 2016/17 is estimated to grow to 2.1 MMT, which includes 620 thousand MT soybean oil, and 1.5 MMT palm oil. Rising domestic consumption for diverse uses will nudge imports up to 2.2 MMT in MY 2017/18, up 0.7 percent over the current year. For soybean oil the import forecast is 610 thousand MT and for palm oil, 1.5 MMT. Bangladesh also imports soybean and mustard in seed form to be crushed and sold locally. Other oil imports include crude soybean oil, crude palm oil, and crude palmolein.

Policy:

For its FY 2016/17, the Government of Bangladesh (GOB) adopted a new tariff structure for importing soybean, soymeal and edible oil (See Table 1). GOB has an open trade policy (no tariffs) for soybean and soybean oil. This duty free policy for soybeans is intended to support the local crushing industry to ensure local supply of soymeal at a lower price. But, since the duty on soymeal has stifled imports, feed millers are in fact seeing increased costs for soymeal as a result of collusion and price-fixing among the leading domestic seed crushing plants. There are no quotas on import of oilseeds and related products. Regarding biosafety restrictions, biosafety rules detail guidelines to follow for importing GE product, but the approval mechanism for importing such shipments is not widely understood or implemented; most GE product is not subject to additional inspection requirements.

Production, Supply and Demand Data Statistics:

Table 1: Bangladesh: Tariff structure oilseed, soymeal and oil based on budget FY 2016/17

HS Code	Items	CD	SD	VAT	AIT	RD	ATV	TTI
12019010	Soya beans, whether or not broken other than Seed, Wrapped/canned upto 2.5 Kg	0	0	15	5	0	4	24
12019090	Soya beans, whether or not broken other than Seed, EXCL. Wrapped/canned upto 2.5 Kg	0	0	0	0	0	0	0
15071000	Crude Oil, Whether or Not Degummed	0	0	15	0	0	4	19
15079010	Refined Soya-Bean Oil	0	0	15	0	0	4	19
15079090	Other Soya-Bean Oil	5	0	15	0	0	4	25
23040000	Oil-Cake And Other Solid Residues, Of Soya-Bean Oil	5	0	0	0	0	4	9.25
15119011	Rbd Palm Stearin	10	0	15	5	0	4	36.01
15119019	Solidified Or Hardened By Mechanical Treatment(Excl. Rbd Palm Stearin)	25	0	15	5	4	4	58.82
15119090	Palm Oil(Excl.Cude)&Its Fractns. Nes. Incld. Refiend Palm Oil	0	0	15	0	0	4	19

Note: CD – Custom duty, SD – Supplementary duty, VAT – Value added tax, AIT – Advance Income Tax RD – Regulatory duty, ATV – Advanced Trade VAT, TTI – Total tax incidence

Table 2. Bangladesh: Commodity, Oilseed, Soybean, PSD
(Area in 1000 hectares and production in 1000 metric tons)

Oilseed, Soybean	2015/2016		2016/2017		2017/2018	
Market Begin Year	Jul 2015		Jul 2016		Jul 2017	
Bangladesh	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Planted	0	80	0	81	0	82
Area Harvested	0	80	0	81	0	82
Beginning Stocks	21	21	135	187	0	281
Production	0	152	0	153	0	156
MY Imports	1123	1123	1200	1150	0	1175
MY Imp. from U.S.	0	0	0	0	0	0
MY Imp. from EU	0	0	0	0	0	0
Total Supply	1144	1296	1335	1490	0	1612
MY Exports	0	0	0	0	0	0
MY Exp. to EU	0	0	0	0	0	0
Crush	1000	1100	1250	1200	0	1300
Food Use Dom. Cons.	5	5	5	5	0	6
Feed Waste Dom. Cons.	4	4	4	4	0	5

Total Dom. Cons.	1009	1109	1259	1209	0	1311
Ending Stocks	135	187	76	281	0	301
Total Distribution	1144	1296	1335	1490	0	1612

Table 3. Bangladesh: Commodity, Meal, Soybean, PSD
(Area in 1000 hectares and production in 1000 metric tons)

Meal, Soybean	**2015/2016**		**2016/2017**		**2017/2018**	
Market Begin Year	**Jul 2015**		**Jul 2016**		**Jul 2017**	
Bangladesh	**USDA Official**	**New Post**	**USDA Official**	**New Post**	**USDA Official**	**New Post**
Crush	1000	1100	1250	1250	0	1300
Extr. Rate, 999.9999	0.787	0.7818	0.7552	0.752	0	0.7846
Beginning Stocks	34	34	147	148	0	184
Production	787	860	944	940	0	1020
MY Imports	495	458	300	350	0	325
MY Imp. from U.S.	0	96	0	90	0	0
MY Imp. from EU	0	0	0	0	0	0
Total Supply	1316	1352	1391	1438	0	1529
MY Exports	0	0	0	0	0	0
MY Exp. to EU	0	0	0	0	0	0
Industrial Dom. Cons.	0	0	0	0	0	0
Food Use Dom. Cons.	4	4	4	4	0	4
Feed Waste Dom. Cons.	1165	1200	1300	1250	0	1350
Total Dom. Cons.	1169	1204	1304	1254	0	1354
Ending Stocks	147	148	87	184	0	175
Total Distribution	1316	1352	1391	1438	0	1529

Table 4. Bangladesh: Commodity, Oil, Soybean, PSD
(Area in 1000 hectares and production in 1000 metric tons)

Oil, Soybean	**2015/2016**		**2016/2017**		**2017/2018**	
Market Begin Year	**Jul 2015**		**Jul 2016**		**Jul 2017**	
Bangladesh	**USDA Official**	**New Post**	**USDA Official**	**New Post**	**USDA Official**	**New Post**
Crush	1000	1100	1250	1200	0	1300
Extr. Rate, 999.9999	0.182	0.1818	0.1816	0.1833	0	0.1808

Beginning Stocks	25	25	125	139	0	104
Production	182	200	227	220	0	235
MY Imports	639	639	600	620	0	610
MY Imp. from U.S.	3	0	3	0	0	0
MY Imp. from EU	0	0	0	0	0	0
Total Supply	846	864	952	979	0	949
MY Exports	0	0	0	0	0	0
MY Exp. to EU	0	0	0	0	0	0
Industrial Dom. Cons.	96	100	98	100	0	100
Food Use Dom. Cons.	625	625	750	775	0	800
Feed Waste Dom. Cons.	0	0	0	0	0	0
Total Dom. Cons.	721	725	848	875	0	900
Ending Stocks	125	139	104	104	0	49
Total Distribution	846	864	952	979	0	949

Table 5. Bangladesh: Commodity, Oil, Palm, PSD
(Area in 1000 hectares and production in 1000 metric tons)

Oil, Palm	**2015/2016**		**2016/2017**		**2017/2018**	
Market Begin Year	**Jul 2015**		**Jul 2016**		**Jul 2017**	
Bangladesh	**USDA Official**	**New Post**	**USDA Official**	**New Post**	**USDA Official**	**New Post**
Area Planted	0	0	0	0	0	0
Area Harvested	0	0	0	0	0	0
Trees	0	0	0	0	0	0
Beginning Stocks	31	31	131	131	0	171
Production	0	0	0	0	0	0
MY Imports	1511	1511	1500	1550	0	1575
MY Imp. from U.S.	0	0	0	0	0	0
MY Imp. from EU	0	0	0	0	0	0
Total Supply	1542	1542	1631	1681	0	1746
MY Exports	0	0	0	0	0	0
MY Exp. to EU	0	0	0	0	0	0
Industrial Dom. Cons.	100	100	100	100	0	100
Food Use Dom. Cons.	1311	1311	1400	1410	0	1450
Feed Waste Dom. Cons.	0	0	0	0	0	0
Total Dom. Cons.	1411	1411	1500	1510	0	1550
Ending Stocks	131	131	131	171	0	196

Total Distribution	1542	1542	1631	1681	0	1746

Table 6: Bangladesh: Livestock Population in Bangladesh

Types of Livestock	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
Cattle (Million)	23.121	23.195	23.341	23.488	23.636	23.785
Chicken (Million)	234.686	242.866	249.011	255.311	261.77	268.393

Source: Poultry industry market assessment-Bangladesh, US Soybean Export Council, 2017

Table 7: Bangladesh: Feed Status (Production, Demand) in Bangladesh

Type of Livestock	Current Production (MMT)	Existing Demand (MMT)	Demand Gap (MMT)	Latent Demand (MMT)	Total Demand (MMT)	Real gap (MMT)
Broiler	2.14	2.40	0.26	0.30	2.70	0.56
Layer	1.19	1.3	0.11	0.6	1.9	0.71
Cattle	0.07	0.08	0.01	0.20	0.10	0.03
Total	3.4	3.77	0.37	1.1	4.87	1.47

Source: Poultry industry market assessment-Bangladesh, US Soybean Export Council, 2017

Table 8: Bangladesh: Status of Feed Production (MT)

Types of Feeds	2013	2014	2015
Broiler	1,696,653	1,877,023	1,986,768
Layer	887,480	1,023,564	1,119,528
Cattle	26,102	32,261	47,304
Total	2,610,235	2,932,848	3,153,600

Source: Poultry industry market assessment-Bangladesh, US Soybean Export Council, 2017

Table 9: Bangladesh: Projected Feed Demand as per different sectors in Poultry

Description	2014 (MT/Year)	2015 (MT/Year)	2020 (MT/Year)
Total DOC (Broiler)/Yr	1,036,800	1,140,480	2,000,504
Layer DOC	1,664,832	1,831,315	3,212,290
Commercial Layer + Broiler	**2,701,632**	**2,971,795**	**5,212,794**
PS (Broiler)	357,500	393,250	689,796
PS (Layer)	27,300	30,030	52,675
GP	7,800	15,600	27,364
Total DOC (PS+ GP)	**392,600**	**438,880**	**769,835**
Total (Broiler +Layer + PS+ GP)	**3,094,232**	**3,410,675**	**5,982,629**
Others (Sonali, Fayoumi, cock, country, etc.)	309,423	341,068	598,263
Total	**3,403,655**	**3,751,743**	**6,580,891**

Source: Feed demand Table, BPICC, November 2014

Table 10: Bangladesh: Requirement of Feed Ingredients (Projected)

Ingredients (Quantity in feed)	2014 (Million MT)	2015 (Million MT)	2020 (Million MT)
Corn/Maize (50-60%)	1.7 - 2.0	1.875 - 2.251	3.290 - 3.948
Meat & Bone meal (3-6%)	0.1 - 0.2	0.112 - 0.225	0.197 - 0.394
Soybean (25-30%)	**0.85 - 1.0**	**0.937 - 1.125**	**1.645 - 1.974**
DDGS (3-5%)	0.1 - 0.17	0.112 - 0.187	0.197 - 0.329
Seed Oil (1-2%)	0.034 - 0.068	0.037 - 0.075	0.065 - 0.131
DORB (3-5%)	0.1 - 0.17	0.112 - 0.187	0.197 - 0.329
Rice polish/bran (4-6%)	0.136 - 0.204	0.150 - 0.225	0.263 - 0.394
Limestone (1-2%)	0.034 - 0.068	0.037 - 0.075	0.065 - 0.131
Medicine (2-2.5%)	6.80 - 8.50	0.075 - 0.930	0.131 - 0.197
Oilseed cake (2-3%)	0.068 - 0.120	0.075 - 0.112	0.394
Others (6%)	0.24	0.225	0.394

Source: Feed requirement table, BPICC, November 2014

Table 11: Bangladesh: Feed Requirement

Animal Type	Adult Cattle Unit	Feed Requirement (Million MT)
Cattle	18,074	46.18
Buffalo	642	1.64
Sheep	241	0.62
Goat	1,945	4.97
Poultry	388	30.45
Total feed requirement		83.85

Source: FAO-APHCA regional workshop in Bangkok: 13-15 August 2013

Table 12: Bangladesh: Total feed available for livestock and poultry

Total Feed	Feed Requirement (million MT)
Total available (Roughage and concentrate)	32.08
Total Roughage	26.27
Total concentrate	5.82

Source: FAO-APHCA regional workshop in Bangkok : 13-15 August 2013

Table 13: Bangladesh: Demand Supply of Feeds

Animal Type	Demand (MMT)			Supply (MMT)		
	Total	Roughage	Concentrate	Total	Roughage	Concentrate
Cattle	46.18	32.33	13.85	13.46	11.47	1.99
Buffalo	1.64	1.15	0.49	0.32	0.25	0.07

Sheep	0.61	0.52	0.09	1.6	1.53	0.07
Goat	4.97	4.22	0.75	12.32	12.23	0.09
Poultry	30.45	0.06	30.39	4.4	0.79	3.61
All	83.85	38.28	45.57	32.1	26.27	5.83

Source: FAO-APHCA regional workshop in Bangkok: 13-15 August 2013

Table 14: Bangladesh: Typical Feed Formula for Broiler Pellet Feed

Types of Raw materials and ingredients	**% by quantity**
Maize	60%
Soya	25%
Meat and Bone Meal	5%
Rice Polish (DOB)	3-5%
Oil	2%
DCP	1%
CaCO3	1.1%
Vitamin	2-5%
Minerals	0.2%
Methionin	0.2%
Lysine	0.1%
Toxin Binder	0.1%
Sodium bi Carbonate	0.1%

Source: Poultry industry market assessment-Bangladesh, US Soybean Export Council, 2017

Table 15: Bangladesh: Cultural Method wise fish production in Bangladesh

Production Methods	**Production Range**	**Number of Pond**	**Area**		**Production**		**MT/Ha**	**Growth rate (%)**
			Ha	**%**	**MT**	**%**		
Extensive	*<1.5MT/Ha*	401,384	45,246	12.15	59,833	3.71	1.322	-23.04
Semi Intensive	*1.5-4 MT/Ha*	1,325,670	230,753	61.96	765,383	47.44	3.317	6.68
Intensive	*4>10MT/Ha*	389,022	84,878	22.79	503,131	31.19	5.928	6.60
Highly Intensive	*10 > MT/Ha*	51,027	11,521	3.09	284,893	17.66	24.729	10.01
Total		2,167,103	372,397	100.00	1,613,240	100.00	4.332	5.71

Source: Department of Fisheries and Bangladesh Bureau of Statistics

Table 16: Bangladesh: Cultural Fish Production 2014-15 in Bangladesh:

Sector	**Area (ha)**	**Production MT**	**% of total Production**	**Productivity**	**Unit**
Pond	372,397	1,613,240	*43.79%*	4,332	kg/ha
Seasonal Cultured Water body	133,330	201,280	*5.46%*	1,510	kg/ha

Baor	5,488	7,267	*0.20%*	1,324	kg/ha
Shrimp /Prawn	275,583	223,582	*6.07%*	811	kg/ha
Pen culture	7,553	13,070	*0.35%*	1,730	kg/ha
Cage Culture (Tilapia /Nilotika)	10	1,969	*0.05%*	20	kg/cu m
Total	794,361	*2,060,408*	*55.92%*		

Source: Aquaculture industry market assessment-Bangladesh, US Soybean Export Council, 2017

Table 17: Bangladesh: Aquaculture feed production, demand and gap analysis

Aqua Type	**Current Production (MMT)**	**Existing Demand (MMT)**	**Demand Gap (MMT)**	**Latent Demand (MMT)**	**Total Demand (MMT)**	**Real gap (MMT)**
Fish	1.287	1.38	0.1	1	2.38	1.093
Shrimp	0.143	0.15	0.01	0.12	0.27	0.127
Total	1.43	1.53	0.11	1.12	2.65	1.22

Source: Aquaculture industry market assessment-Bangladesh, US Soybean Export Council, 2017