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China - Peoples Republic of

Grain and Feed Update

July 2012 Update

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Report Highlights:
For MY 2012/13, corn acreage and production is forecast to rise 2.7 and 1 percent to 34.3 million HA and 195 MMT. Due to relatively higher profit potential for corn, farmers switched soybean and cotton acreage for corn in Heilongjiang, Jilin, and other provinces in the north China plain. MY 2012/13 total wheat production is forecast to decrease from 117.4 MMT to 108 MMT on high temperatures and fusarium graminearum (or commonly known as head blight) in major winter wheat production provinces such as Henan, Anhui, Jiangsu, Hebei, and Shandong. Based on field trip surveys and interviews with industry contacts, Post estimates that winter wheat production will be down 8 percent.

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Executive Summary:
For MY 2012/13, corn acreage and production is forecast to rise 2.7 and 1 percent to 34.3 million HA and 195 MMT. Due to relatively higher profit potential for corn, farmers switched soybean and cotton acreage for corn in Heilongjiang, Jilin, and other provinces in the north China plain. MY 2012/13 total wheat production is forecast to decrease from 117.4 MMT to 108 MMT on high temperatures and fusarium graminearum (or commonly known as head blight) in major winter wheat production provinces such as Henan, Anhui, Jiangsu, Hebei, and Shandong. Based on field trip surveys and interviews with industry contacts, Post estimates that winter wheat production will be down 8 percent.

Corn

For MY 2012/13, corn acreage and production is forecast to rise 2.7 and 1 percent to 34.3 million HA and 195 MMT. Due to relatively higher profit potential for corn, many farmers switched soybean and cotton acreage for corn in Heilongjiang, Jilin, and other provinces in the north China plain.

Based on farm surveys in selected areas in the northeast, farms costs rose slightly from last year, most likely due to higher oil and energy prices. Labor costs were generally unchanged from 2011, ranging from 80 to 100 RMB per mu. However, farmers complained it was getting harder to find hired labor as more people continue to migrate to the cities to find higher paying jobs. Machinery costs for ploughing and/or planting rose around 5 to 10 RMB per day from the previous year (harvest is generally done by hand and occurs in the fall). Water costs averaged around 10 to 30 RMB per mu for 5 to 7 hours of usage. If available, water is pumped from underground wells, although some farmers may pump water from canals (this water may be recycled from upstream). Farmers own their own pumps, although some may be supplied by the village for community use. Fertilizer costs rose around 20 to 30 RMB per kilogram. Fertilizer application is extremely high, averaging between 1 to 1.4 tons per HA. Seed prices generally were unchanged. Seed varieties ranged from Zhengdan958, 21, 771, and Pioneer335. In some areas, because seeds were planted too shallow, fertilizer burned the seed.

Not all farmers choose corn seed varieties based on scientific facts or performance potential. For example, a farmer mentioned that this year he switched seed varieties not due to quality or price competiveness but because he felt using the same seed year on year would adversely affect soil health. Others stated they excessively use fertilizer because they believed it would help increase yields, although there is a limit to how much fertilizer can help in production. Many farmers complained about counterfeit products, ranging from seeds to fertilizer. They did not want to invest in a higher priced, higher

quality product for fear that, if fake, it would lower their overall profit margins. Reportedly, there are a lot of companies that develop and distribute fake products.

For the first half of the year, industry contacts reported that industrial corn processing eased due to reduced demand for starch and ethanol in the industrial sectors, as well as a slowing economy. To date, most ethanol or starch manufacturers have been running at a capacity of around 45 percent (compared to 50 percent last year). Starch use in industrial sectors includes paper making, textile, and food processing. Ethanol use in industrial sectors includes pharmaceutical and chemical industries.

Corn Trade

MY 2012/13 corn imports are revised down to 5 MMT on expectations of higher U.S. corn prices (due to poor weather conditions). That being said, Chinese corn demand is predicted to remain strong on continued growth in the livestock and industrial sector, which is anticipated to continue pressuring Chinese domestic corn prices. Higher Chinese corn prices may stimulate further private or Chinese state government purchases of imported corn. These imports could come from Argentina or Brazil if a phytosanitary protocol or GMO issues are resolved in the next marketing year (see paragraph below).

In 2012, Argentina acquired corn market access to China. However, reportedly certain GMO corn varieties grown in Argentina have not been approved by the Chinese Ministry of Agriculture (MOA). It is unclear when this approval may be granted. Brazil may also acquire Chinese market access if an agreement is reached for a phytosanitary protocol for corn, but it is unclear if there also are GMO approval issues.

Chinese state media reported that in 2012 China and Ukraine signed a framework agreement on cooperation in agriculture that included a clause that China will extend a loan to Ukraine to develop its agricultural sectors (including grain production). However, reportedly the terms are that Ukraine must annually export 2.5 to 3 MMT of corn to China to repay the Chinese loan. It is unclear when exports might begin, as there is no quarantine protocol between Ukraine and China. Establishing a protocol can take many years.

Wheat

MY 2012/13 total wheat production is forecast to decrease from 117.4 MMT to 108 MMT on high temperatures and fusarium graminearum (or commonly known as head blight) in major winter wheat production provinces such as Henan, Anhui, Jiangsu, Hebei, and Shandong. Based on field trip surveys and interviews with industry contacts, Post estimates that winter wheat production will be down 8 percent.

Although Chinese government data predicts an increase in winter wheat production, Post

field survey findings are not as positive. On July 10, 2012, the National Statistical Bureau (NSB) reported that the MY 2012/13 winter wheat production was up 3 percent (3.34 MMT) to 114.3 MMT on higher yields. NSB believes production increased due to favorable weather, government support programs, better field management, and effective disease/pest control. In July, China National Grain & Oil Information Center (CNGOIC) estimated that MY 2012/13 winter wheat and total wheat production rose 0.7 and 0.5 percent to 111.7 MMT and 118 MMT. MOA also recently released an announcement stating that fusarium graminearum is under control and did not affect the winter wheat crop. Apparently MOA had a campaign to spray many wheat fields to contain the disease, but it is unclear if the campaign effectively addressed the problem on a national scale. Interviews with industry contacts and Post field survey findings reveal that head blight had spread to more areas than normal this year, which is expected to affect overall production and available supplies. Affected areas included southern and eastern Henan province, southern Hebei, and western Shandong. According to local media, trade sources, and insurance companies, the disease also affected wheat in Anhui and northern Jiangsu.

Although fusarium graminearum normally affects Chinese wheat on an annual basis, this year higher plant density may have caused the disease to spread over larger areas. According to interviews, in MY 2012/13, farmers applied on average 15-20 Kg of seed per mu. In 2007, farmers applied 10 kg of seed per mu or less. Reportedly, many wheat heads had yellow, white, and black spiklets, with many containing no kernels or smaller shriveled kernels. Farmers said they were unable to apply fungicide to control the disease. During the flowering (or pollination) stage (which occurs around May 10-20 in Henan and Shandong), some farmers noted high moisture and low temperatures, which may have further exacerbated the disease. Some farmers also said that high temperatures caused poor pollination, and wheat yields were negatively affected by a higher level of pests such as aphids and red spiders.

According to industry contacts, extremely hot weather might have lowered wheat test weights as the grain ripened. From June 1-10, parts of Henan, Shandong and Hebei provinces experienced temperatures reportedly as high as 38 degrees Celsius, or 100 degrees Fahrenheit. Some industry contacts believe that temperatures higher than 36 degrees Celsius, or 96.8 degrees Fahrenheit, can cause kernels to be smaller than normal. However, dryer weather also can increase protein levels.

For MY 2012/13, many grain purchase stations reported lower test weights and higher rate of unsound kernels (which could be disease infected or smaller due to stress). For example, some feed mills noted that the test weight for Henan wheat is around 750 grams per liter, while for other years it generally is above 770 grams per liter. Contacts also reported higher rates of unsound kernels, with one dealer reporting it as high as 10 to 17 percent of purchases, while it was less than 8 percent last year. Some flour mills

estimate that the flour milling rate might be down by 2 to 5 percent due to lower test weights.

New crop wheat purchases are generally based on visual and quality tests (test weight and moisture levels), which allow the product to be graded domestically. Grading does not necessarily include sanitary testing. Flour and feed mills that have already purchased the new crop wheat may not test the crop for toxin levels for a couple months, so it currently is unclear how much of the wheat may be affected by toxins (vomitoxin (De-oxynivalenol (DON)) or zearalenone). Grain dealers may not be directly involved in testing the wheat. Wheat with higher toxin levels may be sold on the market as lower quality wheat, which may be utilized for feed use (see Feed section).

Photos Comparing 2011 and 2012 Chinese Wheat

Wheat in Eastern Nanyang, Henan, 2012

Wheat in Kaifeng, Henan 2012

Wheat in Xinhe, Shandong, 2011

The Ministry of Health and Ministry of Agriculture have published standards (GB2715-2005) and (GB 13078.2-2006, GB20833-2007 and GB13978) on acceptable toxin levels for humans and livestock. Flour and feed mills are required to follow these standards before selling product to the public.

Toxin levels for Grains for Human Consumption (Ministry of Health standard GB2715-2005)

Item		Maximum level (μg/kg)
Aflatoxin B_1B		
• Corn	≤	20
• Rice (milled)	≤	10
• Other	≤	5
De-oxynivalenol (DON) - Wheat, Barley, Corn, and their products of grain	≤	1000
Zearalenone - Wheat and Corn	≤	60
Ochratoxin A - Cereals, Beans	≤	5

Toxin Levels for Grains for Livestock Consumption (Ministry of Agriculture standard GB 13078.2-2006, GB20833-2007, and GB13978)

Item		Maximum level (μg/kg)
Aflatoxin B_1 in Feed		
Corn	≤	50
Compound and concentrate feed for piglets	≤	10
Compound and concentrate feed for grower pigs	≤	20
Compound and concentrate feed for broilers	≤	15
Compound and concentrate feed for ducks	≤	20
De-oxynivalenol (DON) in compound feed for swine and calfs	≤	1000
De-oxynivalenol (DON) in compound feed for cattle and poultry	≤	5000
Zearalenone for Compound feed and corn used in feed	≤	500
Ochratoxin A for Compound feed and corn used in feed	≤	100

Wheat Trade

For MY 2012/13, wheat imports are estimated down to 2 MMT on expectations of high international wheat prices due to lower global exportable supplies. Potential lower supplies of high quality Chinese domestic wheat (e.g. lower test weights) may also foment import demand.

Rice

For MY 2012/13, rice acreage and production is unchanged from the last grain update. It is still too early to predict the impact of diseases and pests on production.

In July 2012, the Ministry of Agriculture (MOA) urged provincial agriculture departments to help farmers control the potential spread of pest or diseases on rice production. MOA predicts that during the second half of 2012, excessive rainfall, as well as pests and diseases such as the rice plant hopper, rice leaf roller, rice blast, and rice black-streaked dwarf virus could affect many parts of south, southwest, and northeast China, or 40 percent more acreage than last year (1 billion mu). Through early provincial interventions, MOA hopes total national production losses will be less than 5 percent.

Rice Trade

MY 2011/12 and MY 2012/13 rice imports are revised up to 1.5 MMT. For MY 2011/12, imports are revised due to favorable prices and relatively high profit margins for imported rice. Moreover, the Chinese government utilized the state TRQ for importing Indica rice from Vietnam and Pakistan, most of which was shipped to rice mills in south China provinces. For MY 2012/13, Post forecasts Vietnam and Pakistan rice to remain price competitive on high exportable supplies.

Feed Consumption

For MY 2012/13, wheat substitution for corn in feed is expected to remain high. Reportedly, feed mills can add absorbents to reduce toxin levels (an added cost), which may allow fusarium graminearum affected wheat (with high ppm levels) to be safely used to produce compound feeds. Although it is not clear on how much of the new crop has a high toxicity level (see wheat section), supplies of feed quality wheat may be higher than normal (less available for food use), which may keep feed quality wheat prices competitive over corn. Because domestic corn prices are expected to remain elevated (see corn section), even the additional cost of absorbents (to lower toxin ppm levels) may not inhibit future wheat purchases for feed use.

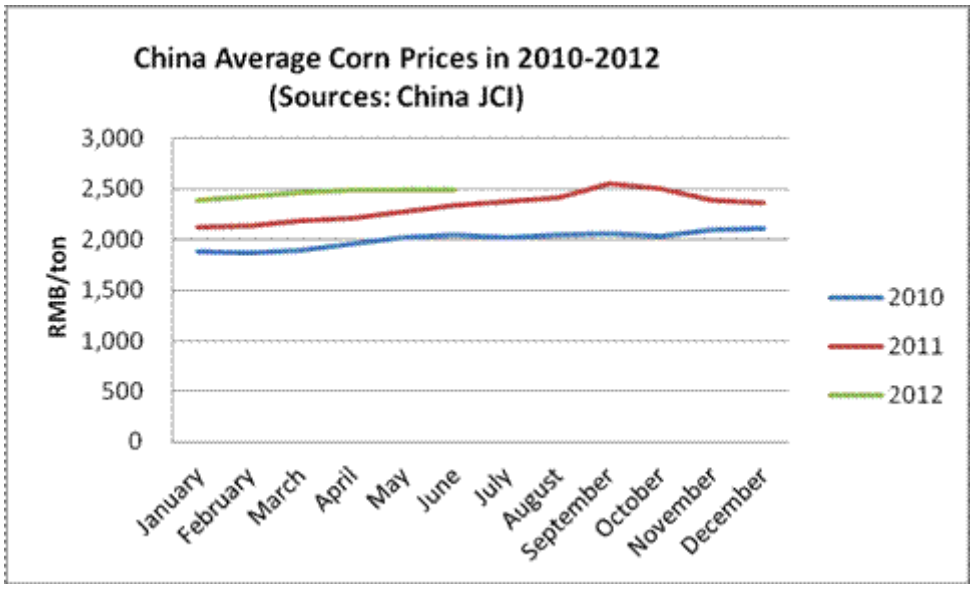
Wheat continues to be used as a substitute for feed products. For duck and grower and finisher pig feed, some industry contacts believe that wheat can completely substitute corn in feed formulas. For other livestock feeds, substitution ranges from 10 to 60

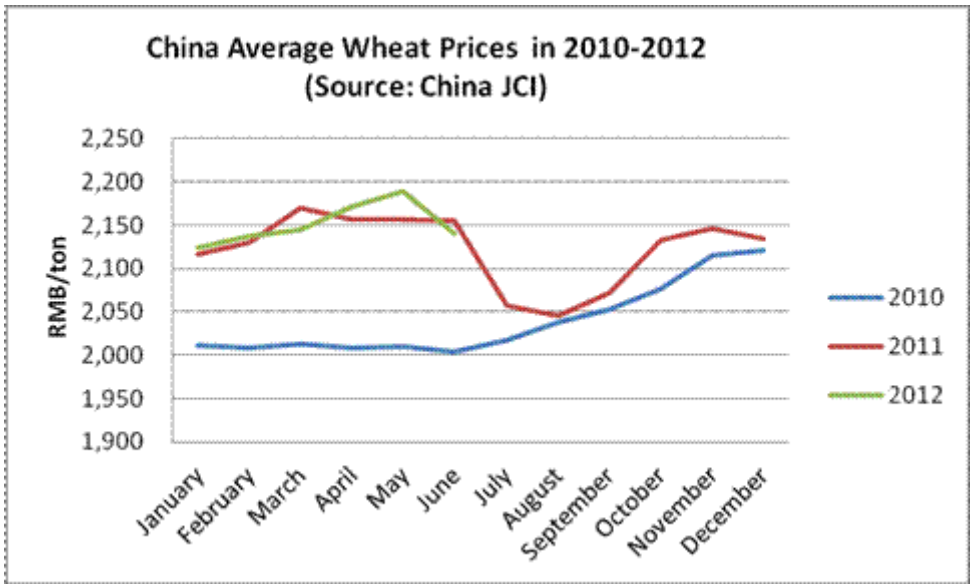
percent. In major wheat producing provinces (north China plains region) such as Henan, Hebei, and Shandong, domestic winter wheat is used in feeds, while in south China (e.g. Guangdong province) imported wheat is a common substitute. In the northeast region (a large corn production area), since the summer of 2011, feed mills have reportedly begun utilizing locally produced spring wheat due to competitive pricing.

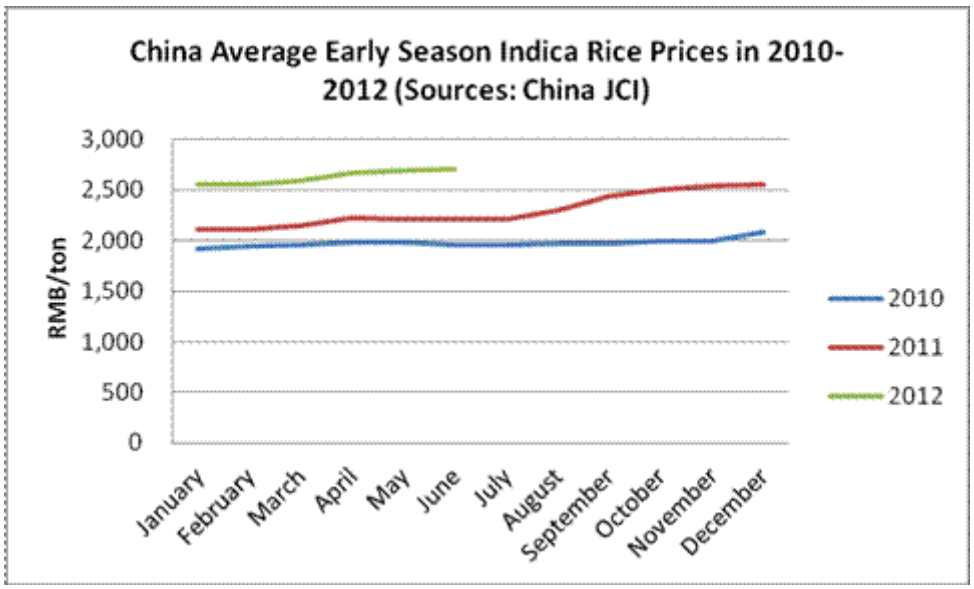
Some industry contacts contend that improved feed processing technology (including the use of enzymes) allows for a higher utilization of wheat in feed formulas, and does not affect meat quality (taste or appearance). However, others have noted that higher wheat percentages may change feed taste, making it unpalatable for hogs.

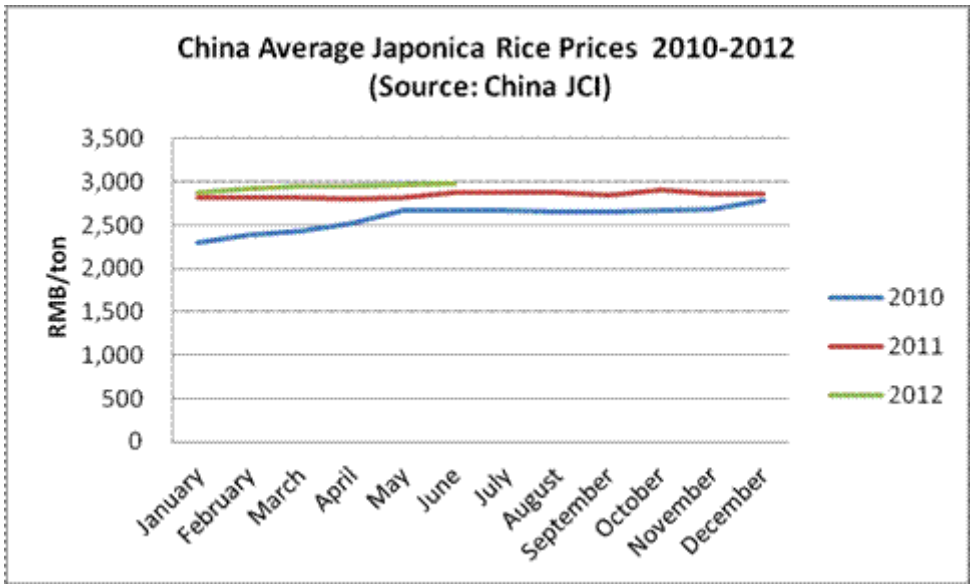
Due to high animal inventory and sluggish consumption, for the first half of 2012 swine sector profits fell by a large margin. Compound feed sales continued to rise from last year, but not as strong as expected. Many household farms switched to concentrate feed to reduce their operational cost. Prices may recover later in the year for major festivals and holidays, such as Chinese National Day and the Mid Autumn Festival in September and October. Moreover, continued low hog prices or profit margins may encourage more small and backyard farmers to exit the business, which may drive further hog farm consolidation and higher compound feed demand (see Grains Annual CH12022).

Price Tables:






China Average Early Season Indica Rice Prices in 2010-2012 (Sources: China JCI)
RMB/ton
3,000
2,500
2,000
1,500
1,000
500
0
January
February
March
April
May
June
July
August
September
October
November
December
2010
2011
2012


China Average Japonica Rice Prices 2010-2012 (Source: China JCI)
RMB/ton
3,500
3,000
2,500
2,000
1,500
1,000
500
0
January
February
March
April
May
June
July
August
September
October
November
December
2010
2011
2012

PSD tables

Corn

Corn China	2010/2011		2011/2012		2012/2013	
(1000 HA) (1000 MT)	Market Year Begin: Oct 2010		Market Year Begin: Oct 2011		Market Year Begin: Oct 2012	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested	32,500	32,500	33,400	33,400	34,300	34,300
Beginning Stocks	51,302	51,302	49,415	49,415	59,095	59,095
Production	177,245	177,245	192,780	192,780	195,000	195,000
MY Imports	979	979	5,000	5,000	5,000	5,000
TY Imports	979	979	5,000	5,000	5,000	5,000
TY Imp. from U.S.	1,028	1028	0		0	
Total Supply	229,526	229,526	247,195	247,195	259,095	259,095
MY Exports	111	111	100	100	200	200
TY Exports	111		100	100	200	200
Feed and Residual	128,000	128,000	131,000	131,000	139,000	139,000
FSI Consumption	52,000	52,000	57,000	57,000	62,000	61,000
Total Consumption	180,000	180,000	188,000	188,000	201,000	200,000
Ending Stocks	49,415	49,415	59,095	59,095	57,895	58,895
Total Distribution	229,526	229,526	247,195	247,195	259,095	259,095

Wheat

Wheat China	2010/2011		2011/2012		2012/2013	
(1000 HA) (1000 MT)	Market Year Begin: Jul 2010		Market Year Begin: Jul 2011		Market Year Begin: Jul 2012	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested	24,257	24,257	24,200	24,257	24,300	24,300
Beginning Stocks	54,425	54,425	59,091	59,091	58,711	59,191
Production	115,180	115,180	117,920	117,400	118,000	108,000
MY Imports	927	927	3,200	3,200	2,000	2,000
TY Imports	927	927	3,200	3200	2,000	2000
TY Imp. from U.S.	156	156	0		0	
Total Supply	170,532	170,532	180,211	179,691	178,711	169,191
MY Exports	941	941	1,000	1,000	1,000	1,000
TY Exports	941	941	1,000	1,000	1,000	1,000
Feed and Residual	13,000	13,000	22,000	21,000	22,000	22,000
FSI Consumption	97,500	97,500	98,500	98,500	100,000	100,500
Total Consumption	110,500	110,500	120,500	119,500	122,000	122,500
Ending Stocks	59,091	59,091	58,711	59,191	55,711	45,691
Total Distribution	170,532	170,532	180,211	179,691	178,711	169,191

Rice

Rice, Milled China	2010/2011		2011/2012		2012/2013	
(1000 HA) (1000 MT)	Market Year Begin: Jul 2010		Market Year Begin: Jul 2011		Market Year Begin: May 2012	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested	29,873	29,873	29,996	29,996	30,150	30,150
Beginning Stocks	40,534	40,534	42,574	42,574	44,774	44,774
Milled Production	137,000	137,000	140,700	140,700	141,000	140,000
Rough Production	195,714	195,714	201,000	201,000	201,429	200,000
Milling Rate (.9999)	7,000	7,000	7,000	7,000	7,000	7,000
MY Imports	540	540	1,500	1,500	1,500	1,500
TY Imports	575	575	1,500	1,500	1,500	1,500
TY Imp. from U.S.	0	0	0	0	0	0
Total Supply	178,074	178,074	184,774	184,774	187,274	186,274
MY Exports	500	500	500	500	600	600
TY Exports	487	500	500	500	600	600
Consumption and Residual	135,000	135,000	139,500	139,500	141,500	141,500
Ending Stocks	42,574	42,574	44,774	44,774	45,174	44,174
Total Distribution	178,074	178,074	184,774	184,774	187,274	186,274