



Economic
Research
Service

Situation and
Outlook

WHS-16I

December
13, 2016

Wheat Outlook

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U.S. Balance Sheet Unchanged, World Production Raised on Gains in Australia

The U.S. 2016/17 all-wheat supply and demand estimates are unchanged this month. The season average price remains at \$3.70 per bushel, with the range narrowed from 40 cents to 20 cents. Several key USDA National Agricultural Statistics Service reports are due out next month and include *Grain Stocks*, *Winter Wheat and Canola Seedings*, as well as final estimates of 2016/17 production figures.

A sharp increase in wheat supplies in Australia is expected to intensify the competition facing U.S. exports during the latter part of 2016/17. Despite strong export commitments, U.S. wheat export prospects are unchanged, reflecting increased competitor supplies and the slowing pace of sales. With global consumption projected only slightly higher, global ending stocks rise, putting additional downward pressure on wheat prices.

Wheat Chart
Gallery will be
updated on
January 17, 2017.

The next release is
January 17, 2017.

Approved by the
World Agricultural
Outlook Board.

Domestic Outlook

2016/17 U.S. Wheat Balance Sheet Unchanged from November

December is a quiet month for the U.S. wheat balance sheet. Ahead of the January release of USDA NASS's *Crop Production, Grain Stocks, and Winter Wheat and Canola Seedings* reports, 2016/17 supply and use categories are unchanged. Slight adjustments to the by-class breakouts for imports and exports are made and are reflected in updated quarterly and annual projections. Based on current prices and wheat marketings to date, the season average farm price range is narrowed from 40 cents to 20 cents this month. The low and high end of the range are now \$3.60 and \$3.80 per bushel, respectively.

Winter Wheat

In January, USDA NASS will release the *Crop Production 2016 Summary* which will provide final wheat production estimates for the 2016/17 marketing year. NASS will also release its first official projections of winter wheat by class and desert Durum seeded area for 2017. Last year's January *Winter Wheat Seedings* report (name now changed to *Winter Wheat and Canola Seedings*) indicated planted area was projected to decline by 7 percent from 2015. For 2017/18, another year-to-year reduction in winter wheat planted area is anticipated and underpins a year-over decline in the all-wheat planted area projection released in the USDA long-term agricultural projections, available here:

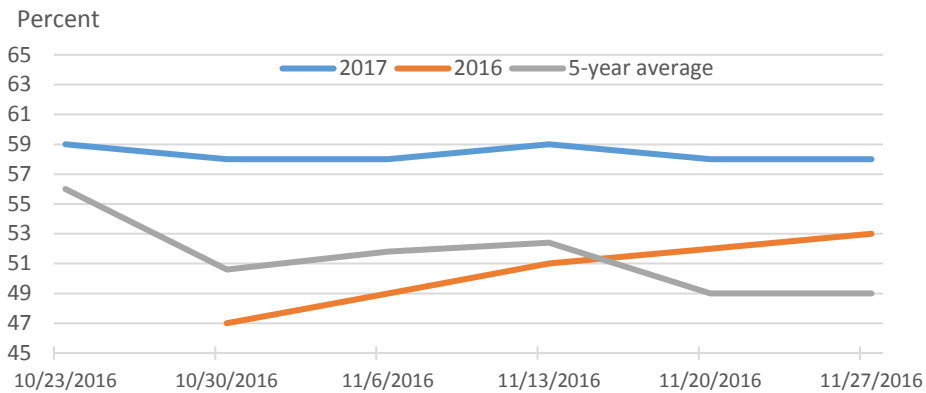
<http://www.usda.gov/oce/commodity/projections/index.htm>. These early-released baseline projections peg all wheat at 48.5 million acres, down from 50.2 million acres in 2016. The 2016/17 planted area was itself down 4.8 million acres from the 2015/16 projection. Year-to-year declines are largely attributable to relatively low wheat prices, which are anticipated to persist through the 2017/18 marketing year before recovering some to \$4.30 per bushel in 2018/19.

Prices for Hard Red Winter (HRW) wheat in the 2016/17 marketing year have been lower than the year prior and are reflective of below-average protein levels. Lower protein levels are often associated with high-yielding crops. Indeed, despite lower year-to-year planted and harvest area, HRW wheat production reached 1.082 billion bushels, more than 30 percent larger than 2015/16. Near ideal weather conditions greatly benefited the crop's development and boosted HRW yields to record highs for the 2016/17 marketing year.

As the new winter wheat crop heads into dormancy, the proportion of the 2017 crop rated "good" to "excellent" is higher than at the same time in 2016 and above the 5-year average (figure 1). Crop ratings have been steady for several weeks, unlike the previous season when the proportion of the 2016 crop rated "good" to "excellent" rose steadily through the fall. In contrast to last year, much of the nation's winter wheat production belt, which is concentrated in the nation's midsection, has recently experienced dry conditions. The USDA Office of the Chief Economist estimates that approximately 27 percent of winter wheat production is within an area experiencing drought. Sections of the High Central Plains, have been particularly affected by dryness. Areas of drought and abnormal dryness are indicated on the USDA U.S Drought Monitor website:

http://droughtmonitor.unl.edu/data/jpg/current/current_usdm.jpg

Figure 1: Winter wheat, percent of U.S. crop rated "good" to "excellent"



Source: USDA, National Agricultural Statistics Service *Crop Progress* weekly report and Economic Research Service calculations.

Based on the pace of trade to date, imports of Soft Red Winter (SRW) are raised 4 million bushels to 36 million. HRW and White wheat imports are unchanged this month and remain at 7 million and 8 million bushels respectively. HRW exports are raised 5 million bushels to 395 million, also based on the pace of trade to date. In November, U.S. Census Bureau data indicated a 288,693 metric ton shipment of U.S. HRW was destined for Morocco, with numerous smaller allotments to other countries contributing to HRW inspections of 725,902 metric tons. November inspections followed a strong showing in October, when 830,150 metric tons of HRW were inspected. In November 2015, just 431,725 metric tons of HRW were inspected ahead of export.

Spring Wheat and Durum

No production changes are made to Spring or Durum wheat this month. Slight adjustments to imports and exports are made and include a 2-million-bushel reduction to Hard Red Spring (HRS) and Durum imports, now projected at 40 and 34 million bushels, respectively. Reduced imports of Durum reflect the pace of trade and expectations of lower imports of Canadian Durum, stemming from quality issues related to vomitoxin contamination. HRS exports are unchanged at 295 million bushels, more than 40 million bushels higher than the 2015/16 figure. Durum exports are reduced by 5 million bushels to 25 million.

Season Average Farm Price Unchanged, Range Narrowed

The wheat season average price is unchanged this month and remains at \$3.70 per bushel at the midpoint. The price range is narrowed from 40 cents to 20 cents and is \$3.60 on the low end and \$3.80 on the high end. USDA NASS monthly price data indicates that the current crop all-wheat price is closely following the 2015 price pattern. In October, strengthening HRS prices pulled the all-wheat price up as the HRW price remained level and near an average of \$3.00 per bushel. Wide carrying charges in Kansas City wheat futures continue to support HRW holding; low cash prices have not provided a strong incentive to move wheat.

International Outlook

Sharp Increase in Australia Boosts World Wheat Production

This month, the world is projected to have much higher wheat production, leading to expanded wheat trade, higher consumption, and increased stocks. The changes are driven mainly by Australia, where a huge wheat output is expected, but are also supported by much lesser increases in projected production in China, the European Union, and Brazil. See table A for specific country changes and a brief discussion.

Projections of Australian 2016/17 wheat production increased 4.7 million tons this month to reach 33.0 million, by far the largest wheat crop in the country's history. Excellent weather conditions throughout the wheat-growing period underpin a sharp increase in projected wheat yields. The increase is based on the quantitative USDA analysis that uses several complimentary approaches and models to come up with the best yield estimate for each wheat-producing region of the country: Vegetation Health Index (VHI), which measures not only the density of vegetation but also accounts for temperature; Normalized Difference Vegetation Index (NDVI), which is used for remote sensing of vegetation for yield forecast; and a model based on the analysis of precipitation trends in analogue years.

The analysis indicates that Australian wheat yields (as well as yields of all other winter crops, such as barley, oats, and canola) in all parts of the country fared extremely well in the current growing season, and are forecast at 2.54 tons per hectare, which is almost 20 percent above the last record of 2011/12. With this yield and a slightly higher wheat area (projected by the Australian Bureau of Agricultural Resource Economics and Sciences [ABARES] in its December report), the forecast for wheat output in the current 2016/17 year is at an all-time record level. The record size of the crop has been fully driven by the eastern states of the country, where precipitation was abundant, while mild temperatures prolonged the wheat growing season, boosting yields to a level never seen before. Even some flooding and water-logging in New South Wales (NSW) and Victoria (VC) appear not to have harmed the crops in any significant way. Recent dryness, which is excellent for maturation and harvesting, is expected to benefit the wheat quality. On the other hand, the major wheat-producing state, Western Australia (WA), is forecast to produce a good, but not exceptional, crop. And though wheat yields in WA are projected to be higher than average, they did not reach their full potential, as several untimely September frosts affected yield in a number of areas. Normally, WA produces on average (past 10 years) about 36 percent of Australia's wheat, but its share of output this year is expected to fall to 29 percent.

As Eastern Australia is on track to produce far beyond the previous record amount of winter crops, wheat being the most important among them, the quality of the crop is crucial for determining Australian export potential. It appears that wheat quality (its protein level) in the eastern states is much better than was expected, given that yields and the protein level of wheat usually are negatively correlated, and that this year wheat protein content was not lowered by the record yields. It is especially high in NSW, which is in line for producing 32 percent of Australian wheat this year. Anecdotal evidence attributes this fact to the additional nitrogen in the soil, both from applications and from the remainder from last year.

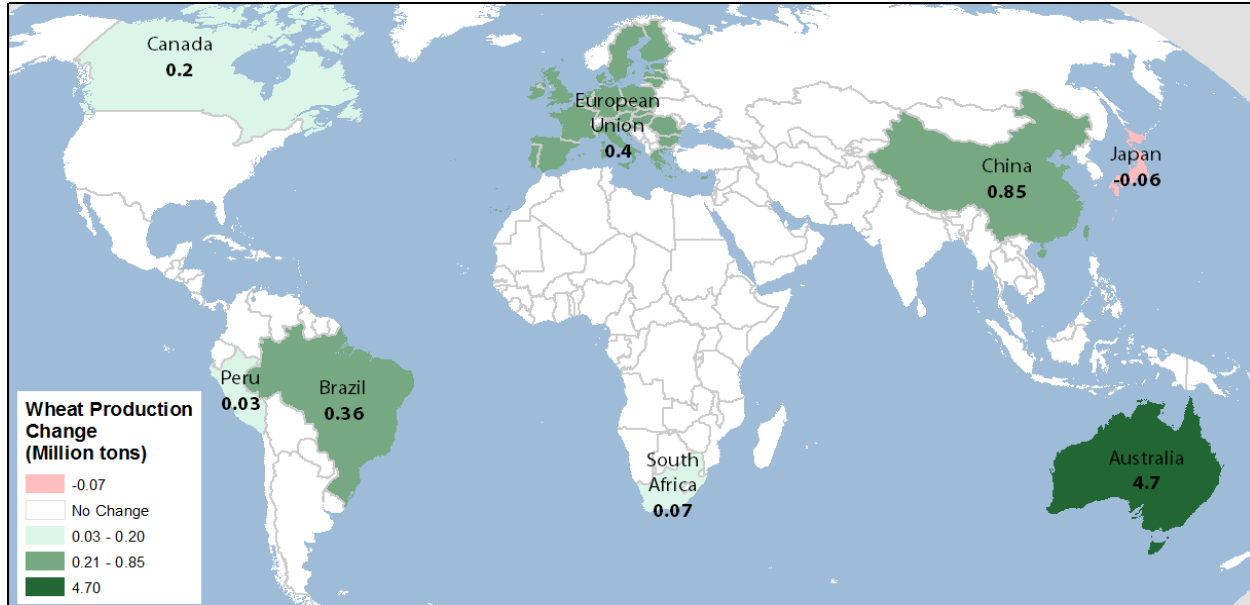
Table A - Wheat production at a glance (2016/17), December 2016

	Country or region	Crop year	Production	Change ¹	Comments
			<i>Million tons</i>		
↑	World		751.3	+6.5	A large increase in record-high world wheat production, up 15.8 million tons compared to previous record of 2015/16.
↑	Foreign		688.4	+6.5	The same as above, as there are no changes in U.S. wheat production.
	United States	June-May	62.9	No change	
↑	Australia	Oct-Sep	33.0	+4.7	Excellent weather conditions throughout wheat growing period underpin sharp increase in projected wheat yields. The increase is based on quantitative USDA analysis of Vegetation Health Index (VHI) and other models. With a slightly higher projected area (issued by the <i>ABARES</i>) the forecasts for all winter crops in the current 2016/17 year are at a record level. See details above.
↑	China	July-June	128.9	+0.9	The increase in wheat production matches the latest information released by the <i>National Bureau of Statistics (NBS)</i> .
↑	European Union	July-June	144.0	+0.4	At this point, the increase is a fine-tuning of the European wheat area and output. This month, small changes are made for Spain, Czech Republic, and Bulgaria.
↑	Brazil	Oct-Sep	6.7	+0.4	The increase in wheat production matches the latest information released by <i>CONAB (Companhia Nacional de Abastecimento)</i> , the national food supply agency.
↑	Canada	July-June	31.7	+0.2	The increase is based on the latest Statistics Canada survey that provides final production estimates for the current crop year, which indicated record yields despite snow that delayed harvesting in Alberta and Saskatchewan, and reduced harvested area.

¹Change from previous month. Changes of less than 0.1 million tons are also made for several countries; see map A.

Source: USDA, Foreign Agricultural Service, Production, Supply, and Distribution online database.

Map A – Wheat production changes for 2016/17, December 2016



Source: USDA, Foreign Agricultural Service, Production, Supply, and Distribution database.

Global Wheat Consumption Projected Higher...

World wheat domestic consumption for 2016/17 is forecast up 3.3 million tons this month to 739.8 million. Wheat feed and residual use is up 1.2 million tons to 148.1 million, while wheat food, seed, and industrial use is increased by 1.1 million tons. Abundant supplies of low-quality, competitively priced wheat encourage additional wheat feeding in wheat-producing countries, and an expansion of wheat consumption in a number of cost-conscious importing countries. At-a-glance information on this month's changes in wheat domestic consumption is presented in table B.

Table B - Wheat domestic consumption at a glance (2016/17), December 2016

	Country or region	Domestic consumption	Change ¹	Comments
		<i>Million tons</i>		
↑	World	739.8	+3.3	Includes both feed and residual use as well as food, seed, and industrial use (FSI).
↑	Foreign	704.6	+3.3	The same as above, as there are no changes in U.S. wheat domestic use.
	United States	35.2	No change	
↑	Australia	8.0	+0.5	By definition, the category "feed and residual use" includes losses that are proportional to the size of crop. With a record-high wheat crop, Australian residual use is increased.
↑	Brazil	11.3	+0.5	Additional supplies of low-quality wheat are expected to be used for feeding.
↑	European Union	129.2	+0.5	Higher estimated wheat production; additional supplies of low-quality wheat that is expected to be used for feeding.
↑	Vietnam	3.0	+0.3	With feed-quality wheat prices at historical lows, the country's pace of imports is high. Additional wheat from Australia and Europe is partly used for food, and partly to expand its wheat feeding for both animals and aquaculture. It is worth mentioning that the feed and residual use category by definition includes unaccounted for wheat sent to neighboring countries.
↑	Canada	9.9	+0.2	Further increase in feed use in Canada is expected. Record-level precipitation and snow accumulation in Alberta and Saskatchewan is expected to reduce wheat quality and to make more wheat available for feeding.
↑	Bangladesh	6.4	+0.2	Food use is up this month, reflecting a high pace of wheat imports, mainly from Russia, Ukraine, Canada, and Australia.
↓	Indonesia	9.2	-0.1	Food use in Indonesia is projected higher by 0.3 million tons , while feed use is reduced by 0.4 million this month (with total consumption down slightly), as the government reportedly put a brake on issuing feed wheat import licenses to shift feeding towards domestically produced corn. Indonesia continues to import food grade wheat mainly from Australia. See "COUNTRY FOCUS: INDONESIA" in the text of feed grain outlook for December.

¹Change from previous month.

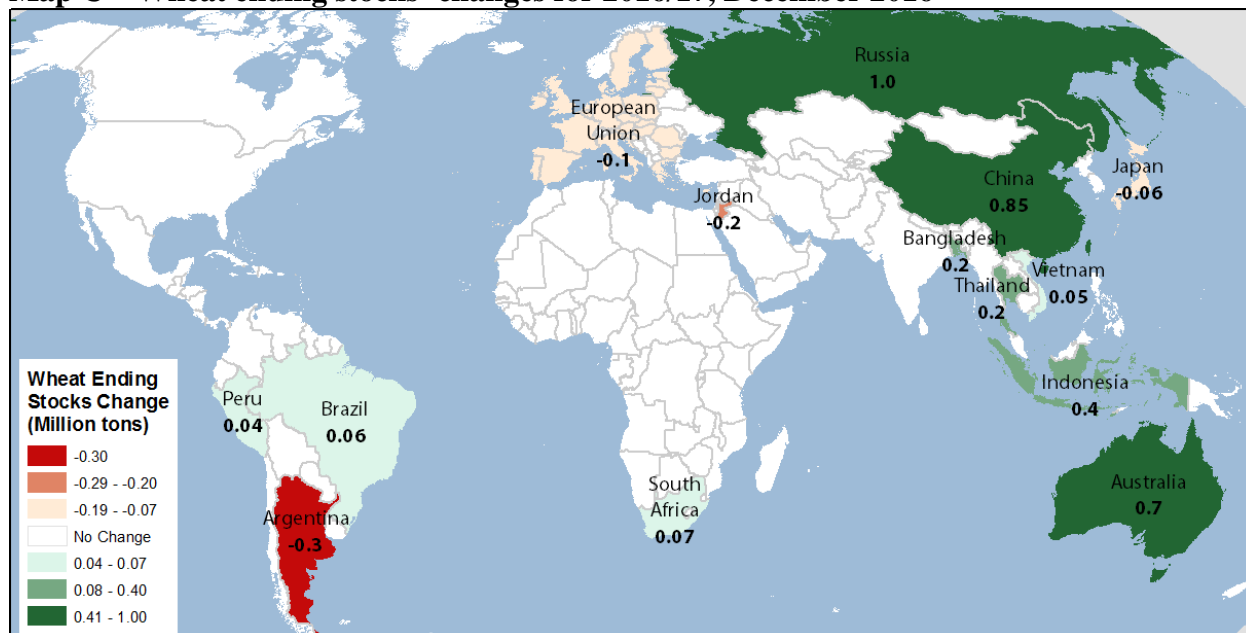
Note: Wheat food use is also raised **0.1 million tons**, each, for Jordan and Nigeria based on higher imports.

Source: USDA, Foreign Agricultural Service, Production, Supply, and Distribution online database.

...And So Are Ending Stocks

The projected expansion of world wheat supplies exceeds higher projected consumption, such that estimates for global ending stocks are up. Stocks are now projected to advance the record to 252.1 million tons, up 2.9 million. Multiple changes in stocks are made this month as a result of specific countries' production and trade revisions. At-a-glance information for this month's changes in wheat ending stocks is presented in map C.

Map C – Wheat ending stocks' changes for 2016/17, December 2016



Source: USDA, Foreign Agricultural Service, Production, Supply, and Distribution database.

World Wheat Record Trade Continues To Rise

Projected record world wheat trade for the international 2016/17 July-June trade year is further increased this month by 1.8 million tons, to 175.4 million. A substantial increase in projected wheat supplies puts further pressure on wheat prices. Wheat-importing countries are taking advantage of this opportunity to use more competitively priced, abundant supplies of lower-quality wheat. The countries in East and Southeast Asia are expected to benefit especially from proximity to ample Australian wheat supplies.

Export prospects for 2016/17 are adjusted significantly for Australia, and less for other countries, to reflect supply shifts. Huge wheat supplies and declining prices in Australia boost its exports, up 2.5 million tons to 23.0 million (and up 3.5 million tons to 24.0 million for its local October-September marketing year), on par with its previous record of 2011/12. Russian exports are reduced 1.0 million tons to 29.0 million, as its pace of exports, though vigorous, does not support the level of exports projected before. See the narrative on Russia below.

COUNTRY FOCUS: RUSSIA

Russian Wheat Exports Reduced, Despite Record Domestic Harvest

(Submitted by William Liefert, ERS/USDA)

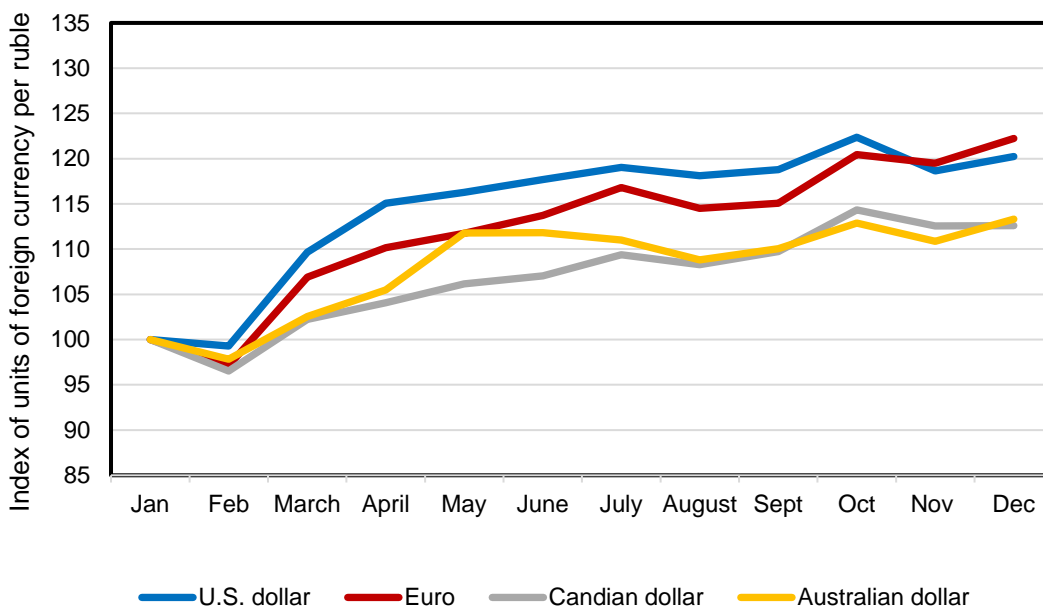
In 2016/17, Russia is projected to have a total grain harvest of 118.8 million tons (together with pulses and buckwheat), including a record wheat crop of 72 million. However, USDA is lowering the country's wheat exports this month from 30 to 29 million tons. One reason is that most other major wheat suppliers will also produce record-large crops, such as Australia, or higher-than-average harvests, such as the United States, Canada, Argentina, Ukraine, and Kazakhstan, generating record world wheat output of 751 million tons. Among major producers, only the EU (and especially France) will have a disappointing crop, of 144 million tons, almost 6 million tons below last year. Most of Russia's wheat exports are low-quality food wheat, with North Africa and Middle East being major markets, though the country is also expanding exports to Africa and some Asian markets.

Russian wheat exports are also under pressure as the ruble has been strengthening (appreciating) against major Western currencies (see chart below), which hurts the price competitiveness on world markets of all Russian exports, and wheat in particular. The ruble has been appreciating over most of the past year, with the ruble to U.S. dollar rate falling from 77 rubles/dollar in January 2016 to 64 in December. The ruble appreciation has occurred mainly because over the year world oil prices have risen, with the average crude spot price increasing from \$30 in January 2016 to \$52 in December. The ruble exchange rate closely follows the world oil price because about two-thirds of Russia's foreign exchange earnings come from energy exports, such that when oil prices rise (fall), world demand for the ruble correspondingly increases (decreases).

A third reason for decreasing Russian wheat exports is possible logistical and infrastructural constraints. In recent years, Russia has substantially increased its port capacity for exporting grain (mainly out of the Black Sea), such that in 2015 the country exported a record 34.5 million tons of grain, and total grain exports of 38.6 million tons are projected for 2016. However, exports beyond that volume could be a stretch for the country's ports. Other challenges also remain for exporting a large amount of wheat and grain concerning rail transport (rail car deficit, inconsistent transportation charges), ambiguous and often superfluous required documentation, and adverse winter weather conditions as rivers freeze, snow and ice impede domestic transportation, and rough winds slow down loading at ports.

With a record harvest and reduced exports, Russian wheat stocks are expected to almost double year-to-year to 10.1 million tons.

Figure 2: Russian ruble appreciating against major currencies in 2016



Source: XE Corporation, X-Rates, <http://www.x-rates.com/>.

Despite Strong Commitments, U.S. Exports are Unchanged

The U.S. wheat export forecast for 2016/17 is unchanged this month at 26.0 million tons. Exports have been very strong in the first months of the season, but have been slowing down. Ample wheat supplies in Australia, Canada, and Argentina, as well as strong exports from the Black Sea countries, are the major reasons why the United States is losing market share in some of its customary markets, Nigeria being the most obvious example.

For at-a-glance information on this month's changes in wheat trade with country-specific details, see table D.

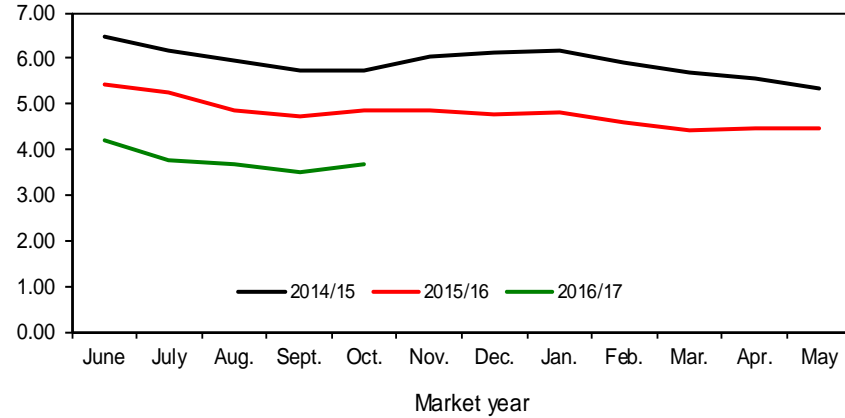
Table D - Wheat trade at a glance (2016/17), December 2016

	Country or region	Trade	Change ¹	Comments
		<i>Million tons</i>		<i>July-June international trade year</i>
↑	World	175.4	+1.8	
↑	Foreign	149.4	+1.8	
Wheat Exports (2016/17)				
↑	United States	26.0	No change	Despite strong export commitments, U.S. wheat export prospects are unchanged, reflecting increased competitor supplies and the slowing pace of sales.
↑	Australia	23.0	+2.5	Record-high projected wheat output, ample exportable supplies, and declining domestic prices make Australia highly competitive. In addition to its traditional exports of milling wheat, Australia is expected to supply more wheat to countries of Southeast Asia, partly replacing Argentina.
↑	Argentina	8.2	+0.2	The increase is based on the strong wheat export shipment pace in October-November, the last months of Argentine 2015/16 local marketing year that ends in November. The December-November marketing year overlaps with the 2016/17 international trade year that starts in July.
↑	Brazil	1.6	+0.1	Higher exportable supplies of wheat this month.
↓	Russia	29.0	-1.0	Appreciation of the local currency (ruble) vis-à-vis currencies of all major wheat exporters. The decline is supported by the pace of exports that is high, but not sufficient to reach the previously projected level. See "COUNTRY FOCUS: RUSSIA" in the report above.
Wheat Imports (2016/17)				
↑	Brazil	7.0	+0.4	Higher pace of wheat imports from Argentina, Paraguay, and Uruguay in recent months despite larger projected output. Wheat output in Brazil is expected to have a large share of low-quality crop, and Brazilian millers need higher-quality wheat for blending purposes.
↑	Bangladesh	5.1	+0.4	Higher pace of wheat imports from Russia, Ukraine, Canada, and Australia in recent months. Prospects of even cheaper wheat purchases from Australia with its record-high crop.
↑	Indonesia	8.8	+0.3	Though in the last few years Ukraine became one of the largest exporters to the countries of Southeast Asia, Australia remains the major supplier of food-quality wheat to the region. In recent months, wheat prices for Australian wheat started to decline, reflecting the record harvest, and Australia seems to be increasing its traditionally large exports to the region. Indonesia is part of the region, and is projected to get a share of the increased cheap Australian wheat supplies.
↑	Vietnam	3.3	+0.3	The above is applicable to Vietnam.
↑	Thailand	3.8	+0.2	The above is applicable to Thailand, though the country remains the top importer from Ukraine.
¹ Change from previous month. Smaller changes for wheat imports are made for a number of countries; see map D.				
Note: Wheat imports are also up 0.1 million tons for Nigeria.				
Source: USDA, Foreign Agricultural Service, Production, Supply, and Distribution online database.				

Figure 1

All wheat average prices received by farmers

Dollars per bushel

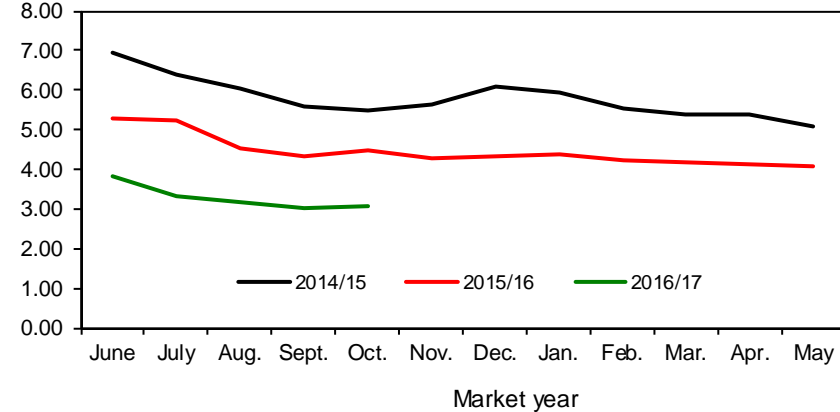


Source: USDA, National Agricultural Statistics Service, *Agricultural Prices*.

Figure 2

Hard red winter wheat average prices received by farmers

Dollars per bushel

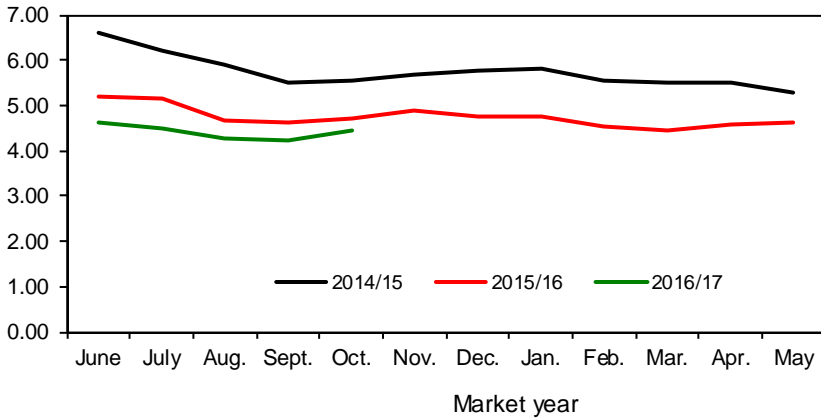


Source: USDA, National Agricultural Statistics Service, *Agricultural Prices*.

Figure 3

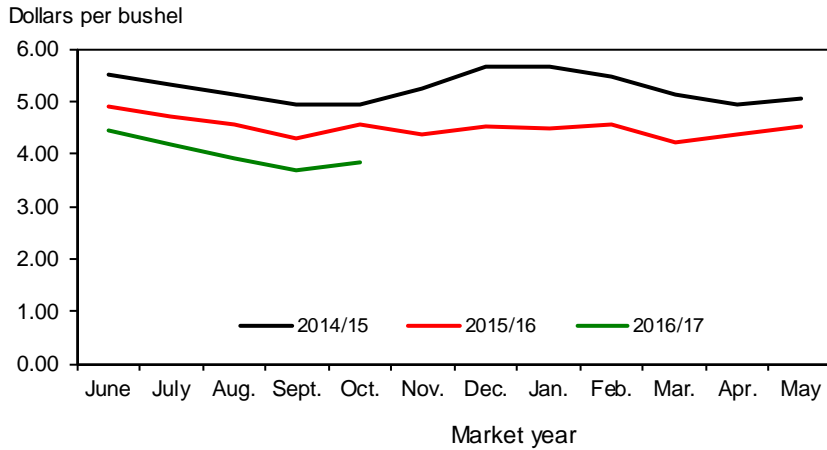
Hard red spring wheat average prices received by farmers

Dollars per bushel



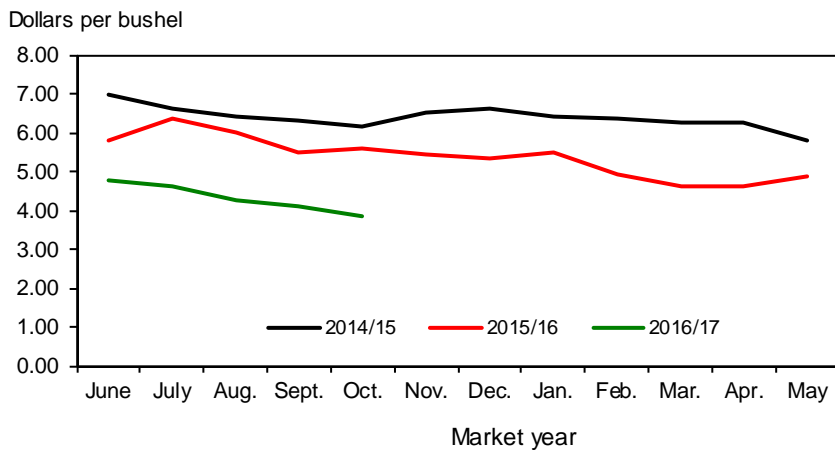
Source: USDA, National Agricultural Statistics Service, *Agricultural Prices*.

Figure 4
Soft red winter wheat average prices received by farmers



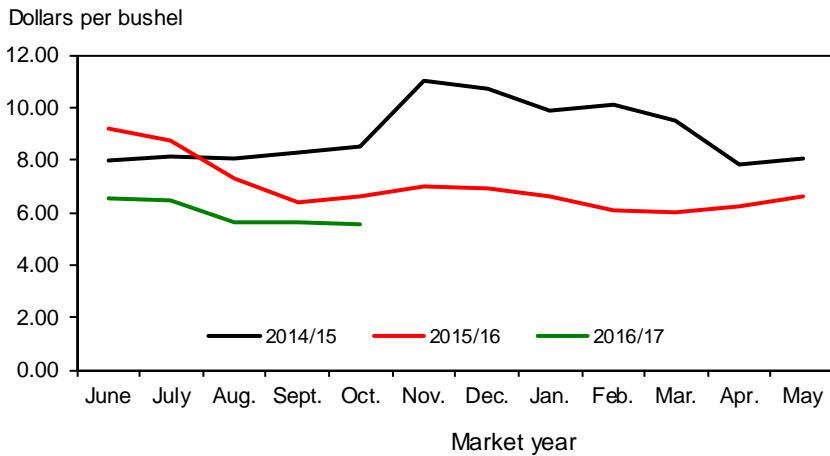
Source: USDA, National Agricultural Statistics Service, *Agricultural Prices*.

Figure 5
Soft white wheat average prices received by farmers



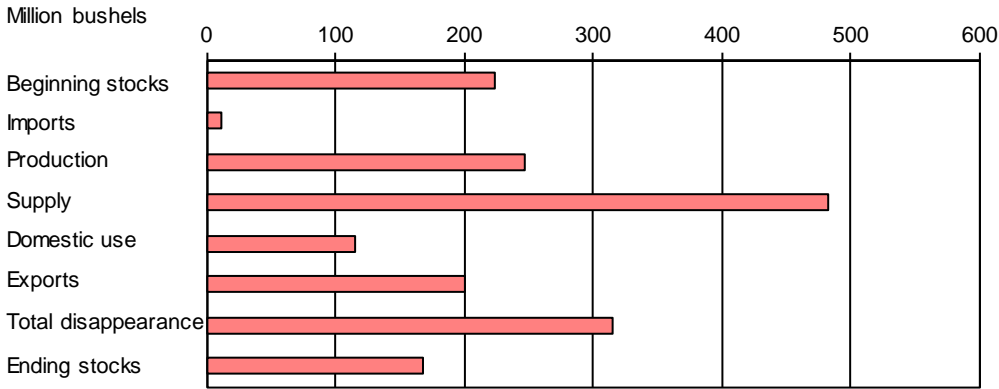
Source: USDA, National Agricultural Statistics Service, *Agricultural Prices*.

Figure 6
Durum wheat average prices received by farmers



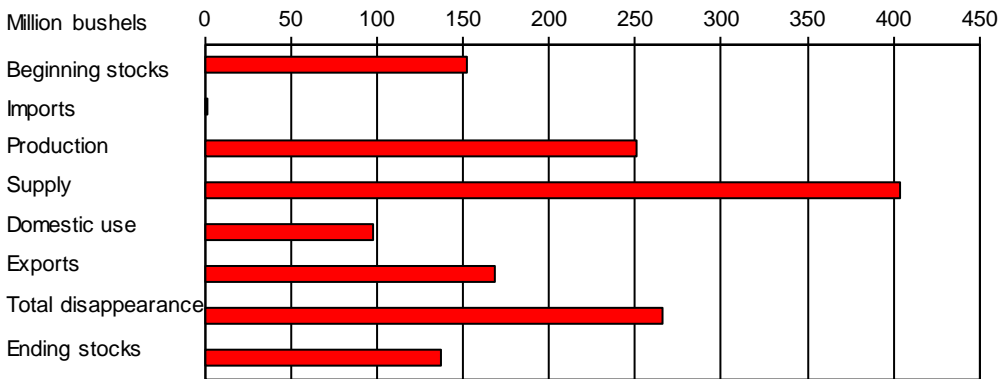
Source: USDA, National Agricultural Statistics Service, *Agricultural Prices*.

Figure 7
All wheat: U.S. supply and disappearance change from prior market year



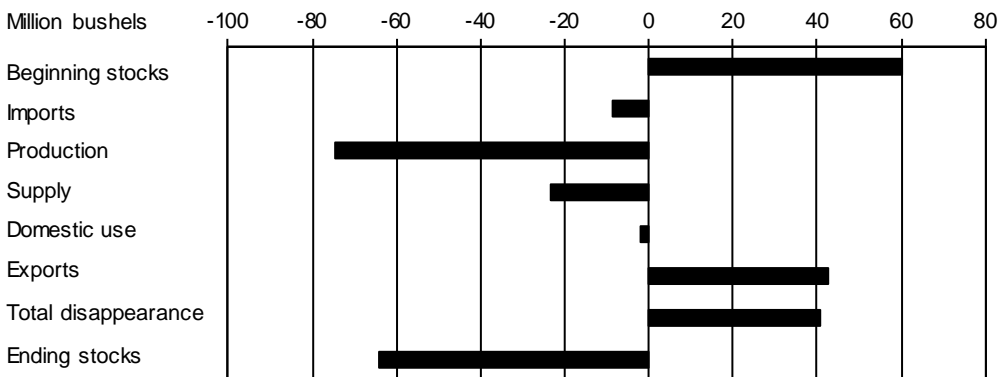
Source: USDA, World Agricultural Outlook Board, *World Agricultural Supply and Demand Estimates*.

Figure 8
Hard red winter wheat: U.S. supply and disappearance change from prior market year



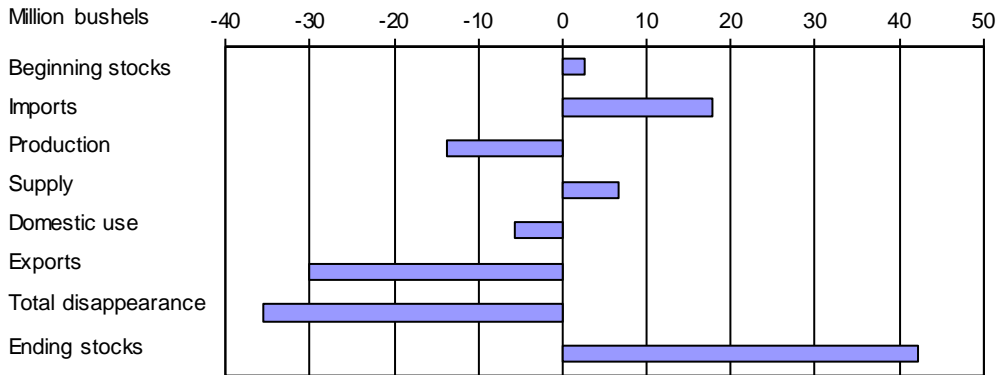
Source: USDA, World Agricultural Outlook Board, *World Agricultural Supply and Demand Estimates*.

Figure 9
Hard red spring wheat: U.S. supply and disappearance change from prior market year



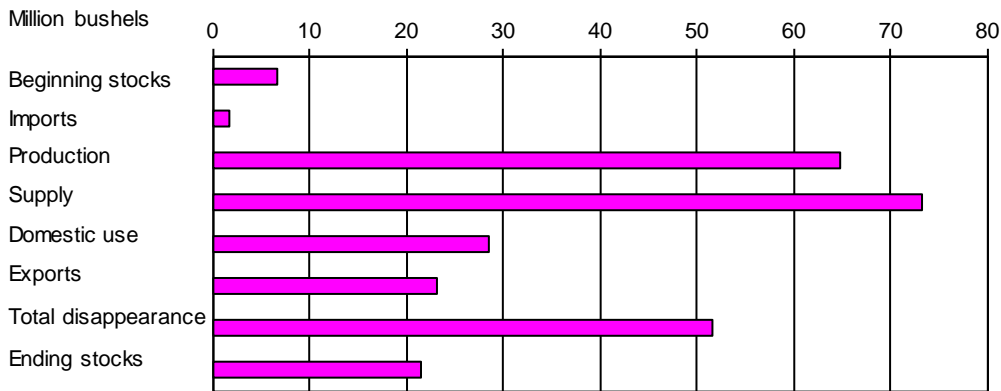
Source: USDA, World Agricultural Outlook Board, *World Agricultural Supply and Demand Estimates*.

Figure 10
Soft red winter wheat: U.S. supply and disappearance change from prior market year



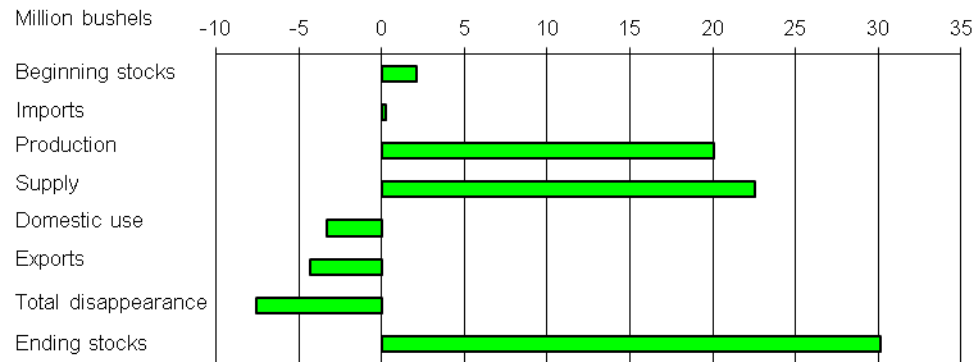
Source: USDA, World Agricultural Outlook Board, *World Agricultural Supply and Demand Estimates*.

Figure 11
White wheat: U.S. supply and disappearance change from prior market year



Source: USDA, World Agricultural Outlook Board, *World Agricultural Supply and Demand Estimates*.

Figure 12
Durum: U.S. supply and disappearance change from prior market year



Source: USDA, World Agricultural Outlook Board, *World Agricultural Supply and Demand Estimates*.

Table 1--Wheat: U.S. market year supply and disappearance, 12/13/2016

Item and unit		2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17
Area:								
Planted	Million acres	52.6	54.3	55.3	56.2	56.8	55.0	50.2
Harvested	Million acres	46.9	45.7	48.8	45.3	46.4	47.3	43.9
Yield	Bushels per acre	46.1	43.6	46.2	47.1	43.7	43.6	52.6
Supply:								
Beginning stocks	Million bushels	975.6	863.0	742.6	717.9	590.3	752.4	975.7
Production	Million bushels	2,163.0	1,993.1	2,252.3	2,135.0	2,026.3	2,061.9	2,309.7
Imports ¹	Million bushels	96.9	113.1	124.3	172.5	151.3	112.9	125.0
Total supply	Million bushels	3,235.6	2,969.2	3,119.2	3,025.3	2,767.9	2,927.2	3,410.4
Disappearance:								
Food use	Million bushels	925.6	941.4	950.8	955.1	958.2	957.4	963.0
Seed use	Million bushels	70.7	75.6	73.1	77.0	79.4	67.2	69.0
Feed and residual use	Million bushels	84.8	158.5	365.3	226.7	113.7	151.9	260.0
Total domestic use	Million bushels	1,081.1	1,175.5	1,389.3	1,258.8	1,151.3	1,176.5	1,292.0
Exports ¹	Million bushels	1,291.4	1,051.1	1,012.1	1,176.2	864.1	775.1	975.0
Total disappearance	Million bushels	2,372.6	2,226.6	2,401.4	2,435.1	2,015.5	1,951.6	2,267.0
Ending stocks	Million bushels	863.0	742.6	717.9	590.3	752.4	975.7	1,143.4
Stocks-to-use ratio		36.4	33.4	29.9	24.2	37.3	50.0	50.4
Loan rate	Dollars per bushel	2.94	2.94	2.94	2.94	2.94	2.94	2.94
Contract/direct payment rate	Dollars per bushel	0.52	0.52	0.52	0.52			
Farm price ²	Dollars per bushel	5.70	7.24	7.77	6.87	5.99	4.89	3.60-3.80
Market value of production	Million dollars	12,579	14,269	17,383	14,604	11,915	10,203	8,546

Latest market year is projected; previous market year is estimated. Totals may not add due to rounding.

¹Includes flour and selected other products expressed in grain-equivalent bushels.

²U.S. season-average price based on monthly prices weighted by monthly marketings. Prices do not include an allowance for loans outstanding and government purchases.

Source: USDA, World Agricultural Outlook Board, World Agricultural Supply and Demand Estimates and supporting materials.

Date run: 12/12/2016

Table 2--Wheat by class: U.S. market year supply and disappearance, 12/13/2016

Market year, item, and unit		All wheat	Hard red winter ¹	Hard red spring ¹	Soft red winter ¹	White ¹	Durum	
2015/16	Area:							
	Planted acreage	Million acres	55.00	29.17	12.62	7.09	4.16	1.95
	Harvested acreage	Million acres	47.32	23.22	12.33	5.89	3.96	1.91
	Yield	Bushels per acre	43.58	35.77	46.03	60.92	55.70	43.96
	Supply:							
	Beginning stocks	Million bushels	752.39	293.74	212.00	154.00	67.00	25.66
	Production	Million bushels	2,061.94	830.45	567.64	359.05	220.79	84.01
	Imports ²	Million bushels	112.91	6.20	48.55	18.24	6.18	33.73
	Total supply	Million bushels	2,927.25	1,130.38	828.19	531.30	293.98	143.40
	Disappearance:							
	Food use	Million bushels	957.40	391.29	251.00	153.00	83.00	79.11
	Seed use	Million bushels	67.19	29.69	16.67	11.70	5.50	3.64
	Feed and residual use	Million bushels	151.89	37.33	36.09	89.97	-15.01	3.52
	Total domestic use	Million bushels	1,176.48	458.31	303.75	254.67	73.49	86.27
	Exports ²	Million bushels	775.08	226.46	252.47	120.00	146.81	29.33
	Total disappearance	Million bushels	1,951.56	684.77	556.22	374.67	220.30	115.60
	Ending stocks	Million bushels	975.69	445.62	271.97	156.63	73.68	27.80
2016/17	Area:							
	Planted acreage	Million acres	50.15	26.59	10.95	6.02	4.19	2.41
	Harvested acreage	Million acres	43.89	21.86	10.67	4.98	4.02	2.37
	Yield	Bushels per acre	52.62	49.48	46.23	69.37	71.04	44.02
	Supply:							
	Beginning stocks	Million bushels	975.69	445.62	271.97	156.63	73.68	27.80
	Production	Million bushels	2,309.68	1,081.69	493.13	345.23	285.51	104.12
	Imports ²	Million bushels	125.00	7.00	40.00	36.00	8.00	34.00
	Total supply	Million bushels	3,410.36	1,534.31	805.09	537.86	367.19	165.92
	Disappearance:							
	Food use	Million bushels	963.00	375.00	267.00	155.00	86.00	80.00
	Seed use	Million bushels	69.00	31.00	15.00	14.00	6.00	3.00
	Feed and residual use	Million bushels	260.00	150.00	20.00	80.00	10.00	.00
	Total domestic use	Million bushels	1,292.00	556.00	302.00	249.00	102.00	83.00
	Exports ²	Million bushels	975.00	395.00	295.00	90.00	170.00	25.00
	Total disappearance	Million bushels	2,267.00	951.00	597.00	339.00	272.00	108.00
	Ending stocks	Million bushels	1,143.36	583.31	208.09	198.86	95.19	57.92

Latest market year is projected; previous market year is estimated. Totals may not add due to rounding.

¹Area and yield data are unpublished National Agricultural Statistics Service data. Supply and disappearance data, except production, are approximations.

²Includes flour and selected other products expressed in grain-equivalent bushels.

Source: USDA, National Agricultural Statistics Service, Crop Production and unpublished data; and USDA, World Agricultural Outlook Board, World Agricultural Supply and Demand Estimates and supporting materials.

Date run: 12/12/2016

Table 3--Wheat: U.S. quarterly supply and disappearance (million bushels), 12/13/2016

Market year and quarter		Production	Imports ¹	Total supply	Food use	Seed use	Feed and residual use	Exports ¹	Ending stocks
2008/09	Jun-Aug	2,512	28	2,845	236	1	405	345	1,858
	Sep-Nov		28	1,886	238	54	-124	295	1,422
	Dec-Feb		36	1,458	219	1	28	170	1,040
	Mar-May		35	1,075	233	21	-41	206	657
	Mkt. year	2,512	127	2,945	927	78	268	1,015	657
2009/10	Jun-Aug	2,209	28	2,893	231	1	251	200	2,209
	Sep-Nov		24	2,234	237	44	-81	252	1,782
	Dec-Feb		30	1,812	222	1	31	201	1,356
	Mar-May		37	1,393	229	21	-59	227	976
	Mkt. year	2,209	119	2,984	919	68	142	879	976
2010/11	Jun-Aug	2,163	27	3,166	235	1	215	265	2,450
	Sep-Nov		24	2,473	242	51	-63	311	1,933
	Dec-Feb		23	1,956	221	1		308	1,425
	Mar-May		22	1,448	228	16	-67	407	863
	Mkt. year	2,163	97	3,236	926	71	85	1,291	863
2011/12	Jun-Aug	1,993	21	2,877	230	5	201	295	2,147
	Sep-Nov		32	2,179	244	51	-16	238	1,663
	Dec-Feb		30	1,693	231	1	44	217	1,199
	Mar-May		30	1,229	236	19	-70	301	743
	Mkt. year	1,993	113	2,969	941	76	159	1,051	743
2012/13	Jun-Aug	2,252	26	3,020	238	1	403	264	2,115
	Sep-Nov		33	2,148	247	55	-22	198	1,671
	Dec-Feb		35	1,705	229	1	5	235	1,235
	Mar-May		31	1,266	238	15	-20	315	718
	Mkt. year	2,252	124	3,119	951	73	365	1,012	718
2013/14	Jun-Aug	2,135	36	2,889	235	4	422	358	1,870
	Sep-Nov		48	1,918	249	53	-168	309	1,475
	Dec-Feb		42	1,517	231	2	-1	228	1,057
	Mar-May		47	1,104	240	18	-27	282	590
	Mkt. year	2,135	172	3,025	955	77	227	1,176	590
2014/15	Jun-Aug	2,026	44	2,661	239	6	256	253	1,907
	Sep-Nov		35	1,942	248	49	-93	208	1,530
	Dec-Feb		37	1,566	231	2	8	185	1,140
	Mar-May		36	1,176	240	22	-58	219	752
	Mkt. year	2,026	151	2,768	958	79	114	864	752
2015/16	Jun-Aug	2,062	27	2,841	240	1	298	205	2,097
	Sep-Nov		27	2,124	249	45	-108	192	1,746
	Dec-Feb		34	1,781	230	1	-1	179	1,372
	Mar-May		25	1,397	239	20	-37	199	976
	Mkt. year	2,062	113	2,927	957	67	152	775	976
2016/17	Jun-Aug	2,310	33	3,318	238	2	284	267	2,527
	Mkt. year	2,310	125	3,410	963	69	260	975	1,143

Latest market year is projected; previous market year is estimated. Totals may not add due to rounding.

¹Includes flour and selected other products expressed in grain-equivalent bushels.

Source: USDA, World Agricultural Outlook Board, World Agricultural Supply and Demand Estimates and supporting materials.

Date run: 12/12/2016

Table 4--Wheat: Monthly food disappearance estimates (1,000 grain-equivalent bushels), 12/13/2016

Mkt year and month ¹	Wheat ground for flour	+	Food imports ²	+	Nonmilled food use ³	-	Food exports ²	=	Food use ⁴
2014/15	Jun	74,070		2,740		2,000		1,760	77,050
	Jul	74,244		3,035		2,000		1,866	77,413
	Aug	81,143		2,853		2,000		1,541	84,455
	Sep	78,025		2,507		2,000		1,812	80,720
	Oct	82,617		2,941		2,000		1,825	85,733
	Nov	79,077		2,731		2,000		2,075	81,734
	Dec	74,226		2,908		2,000		1,625	77,509
	Jan	73,996		2,815		2,000		1,661	77,150
	Feb	73,409		2,614		2,000		1,824	76,198
	Mar	77,884		3,024		2,000		2,183	80,725
	Apr	75,805		2,889		2,000		1,681	79,012
	May	77,507		2,948		2,000		1,847	80,609
2015/16	Jun	74,155		3,374		2,000		1,760	77,769
	Jul	74,749		2,992		2,000		1,850	77,891
	Aug	81,695		2,786		2,000		1,889	84,592
	Sep	78,556		2,771		2,000		1,928	81,399
	Oct	82,604		2,861		2,000		2,119	85,346
	Nov	79,065		2,994		2,000		2,050	82,009
	Dec	74,215		2,873		2,000		2,118	76,969
	Jan	73,643		2,770		2,000		2,026	76,386
	Feb	73,058		2,756		2,000		1,655	76,159
	Mar	77,511		2,851		2,000		2,146	80,216
	Apr	74,776		4,207		2,000		1,771	79,212
	May	76,456		2,836		2,000		2,023	79,268
2016/17	Jun	73,149		2,934		2,000		2,137	75,945
	Jul	74,188		2,642		2,000		1,666	77,164
	Aug	81,082		3,196		2,000		1,856	84,422
	Sep	77,966		2,537		2,000		2,120	80,383
	Oct			2,969				2,323	646

¹Current year is preliminary. Previous year is preliminary through August of current year, estimated afterwards.

²Food imports and exports used to calculate total food use. Includes all categories of wheat flour, semolina, bulgur, and couscous and selected categories of pasta.

³Wheat prepared for food use by processes other than milling.

⁴Estimated food use equals wheat ground for flour plus food imports plus nonmilled food use minus food exports.

Source: Data through the 2nd quarter of 2011 was calculated using data from U.S. Department of Commerce, Bureau of the Census' Flour Milling Products (MQ311A) and U.S. Department of Commerce, Bureau of Economic Analysis' Foreign Trade Statistics. Subsequent flour milling calculations are based on data from the North American Millers' Association.

Date run: 12/12/2016

Table 5--Wheat: National average price received by farmers (dollars per bushel), 12/13/2016

Month	All wheat		Winter		Durum		Other spring	
	2015/16	2016/17	2015/16	2016/17	2015/16	2016/17	2015/16	2016/17
June	5.42	4.20	5.20	3.97	9.16	6.50	5.20	4.61
July	5.23	3.75	5.15	3.56	8.74	6.47	5.15	4.48
August	4.84	3.67	4.80	3.41	7.28	5.59	4.71	4.24
September	4.72	3.49	4.64	3.25	6.36	5.62	4.68	4.22
October	4.86	3.68	4.76	3.36	6.57	5.52	4.78	4.38
November	4.86		4.66		6.97		4.91	
December	4.75		4.57		6.93		4.80	
January	4.82		4.63		6.60		4.81	
February	4.61		4.47		6.08		4.56	
March	4.40		4.28		6.03		4.47	
April	4.46		4.31		6.24		4.55	
May	4.45		4.28		6.57		4.64	

Source: USDA, National Agricultural Statistics Service, Agricultural Prices.

Table 6--Wheat: National average prices received by farmers by class (dollars per bushel), 12/13/2016

Month	Hard red winter		Soft red winter		Hard red spring		White	
	2015/16	2016/17	2015/16	2016/17	2015/16	2016/17	2015/16	2016/17
June	5.26	3.84	4.91	4.45	5.18	4.61	5.79	4.75
July	5.21	3.32	4.69	4.16	5.13	4.48	6.34	4.63
August	4.55	3.15	4.54	3.92	4.67	4.25	6.00	4.24
September	4.35	3.03	4.31	3.69	4.63	4.24	5.49	4.09
October	4.46	3.07	4.56	3.83	4.73	4.46	5.57	3.87
November	4.30		4.37		4.88		5.44	
December	4.34		4.52		4.77		5.35	
January	4.37		4.48		4.77		5.48	
February	4.22		4.54		4.54		4.94	
March	4.19		4.21		4.46		4.63	
April	4.13		4.38		4.56		4.62	
May	4.08		4.52		4.62		4.88	

Source: USDA, National Agricultural Statistics Service, Agricultural Prices.

Date run: 12/12/2016

Table 7--Wheat: Average cash grain bids at principal markets, 12/13/2016

Month	No. 1 hard red winter (ordinary protein) Kansas City, MO (dollars per bushel)		No. 1 hard red winter (13% protein) Kansas City, MO (dollars per bushel)		No. 1 hard red winter (ordinary protein) Portland, OR (dollars per bushel)		No. 1 hard red winter (ordinary protein) Texas Gulf, TX ¹ (dollars per metric ton)	
	2015/16	2016/17	2015/16	2016/17	2015/16	2016/17	2015/16	2016/17
	June	6.40	5.04	6.64	5.54	6.13	5.18	209.81
July	6.27	4.24	6.36	5.18	5.92	4.66	197.31	151.57
August	5.70	4.15	5.86	5.32	5.44	4.62	179.68	149.18
September	5.44	4.24	5.59	5.36	5.69	4.41	172.70	150.47
October	5.62	4.40	5.73	5.58	5.86	4.20	--	152.12
November	5.55	4.64	5.72	5.70	5.56	4.12	177.10	150.65
December	5.60	--	5.79	--	5.46	--	189.60	--
January	5.46	--	5.71	--	5.42	--	193.64	--
February	5.28	--	5.48	--	5.28	--	187.03	--
March	5.34	--	5.53	--	5.33	--	191.43	--
April	5.22	--	5.44	--	5.27	--	187.39	--
May	5.08	--	5.42	--	5.18	--	171.78	--

Month	No. 1 dark northern spring (13% protein) Chicago, IL (dollars per bushel)		No. 1 dark northern spring (14% protein) Chicago, IL (dollars per bushel)		No. 1 dark northern spring (14% protein) Portland, OR (dollars per bushel)		No. 1 hard amber durum Minneapolis, MN (dollars per bushel)	
	2015/16	2016/17	2015/16	2016/17	2015/16	2016/17	2015/16	2016/17
	June	6.50	--	7.56	--	7.48	6.35	--
July	--	--	--	--	6.71	5.82	--	--
August	--	--	--	--	6.10	5.97	--	--
September	--	--	--	--	6.32	5.98	--	--
October	--	--	--	--	6.53	6.34	--	--
November	--	--	--	--	6.39	6.26	--	--
December	--	--	--	--	6.34	--	--	--
January	--	--	--	--	6.15	--	--	--
February	--	--	--	--	6.09	--	--	--
March	--	--	--	--	6.11	--	--	--
April	--	--	--	--	6.27	--	--	--
May	--	--	--	--	6.27	--	--	--

Month	No. 2 soft red winter St. Louis, MO (dollars per bushel)		No. 2 soft red winter Chicago, IL (dollars per bushel)		No. 2 soft red winter Toledo, OH (dollars per bushel)		No. 1 soft white Portland, OR (dollars per bushel)	
	2015/16	2016/17	2015/16	2016/17	2015/16	2016/17	2015/16	2016/17
	June	5.14	4.74	5.17	4.70	5.22	4.69	--
July	5.08	4.23	5.40	4.12	5.58	4.22	--	5.07
August	4.48	3.90	5.00	3.99	5.20	4.03	5.55	4.89
September	4.28	3.89	4.86	3.76	5.04	3.72	5.38	4.77
October	4.45	3.89	5.02	3.82	5.25	3.90	5.49	4.65
November	4.41	4.04	4.98	3.88	5.16	3.92	5.37	4.64
December	4.22	--	4.83	--	4.97	--	--	--
January	4.32	--	4.75	--	4.93	--	5.31	--
February	4.70	--	4.69	--	4.69	--	5.30	--
March	4.74	--	4.70	--	4.61	--	--	--
April	4.79	--	4.71	--	4.63	--	5.33	--
May	4.64	--	4.65	--	4.61	--	5.34	--

--Indicates data is not available or no quote.

¹Free on board.

Source: USDA, Agricultural Marketing Service, State Grain Reports

Date run: 12/12/2016

Table 8--Wheat: U.S. exports and imports for last 6 months (1,000 bushels), 12/13/2016

Item		May 2016	Jun 2016	Jul 2016	Aug 2016	Sep 2016	Oct 2016
Exports	All wheat grain	64,011	85,398	75,502	100,797	103,769	61,679
	All wheat flour ¹	1,464	1,710	1,338	1,401	1,669	1,870
	All wheat products ²	593	460	371	496	480	485
	Total all wheat	66,069	87,567	77,210	102,694	105,917	64,034
Imports	All wheat grain	4,091	5,757	7,078	10,957	9,149	5,946
	All wheat flour ¹	1,200	1,266	1,058	1,339	1,180	1,272
	All wheat products ²	1,658	1,698	1,614	1,892	1,378	1,717
	Total all wheat	6,948	8,721	9,750	14,187	11,707	8,934

Totals may not add due to rounding.

¹Expressed in grain-equivalent bushels. Includes meal, groats, and durum.

²Expressed in grain-equivalent bushels. Includes bulgur, couscous, and selected categories of pasta.

Source: U.S. Department of Commerce, U.S. Census Bureau, Foreign Trade Statistics; and ERS calculations using Census trade statistics.

Date run: 12/12/2016

Table 9--Wheat: U.S. exports, Census and export sales comparison (1,000 metric tons)

Importing country	2014/15		2015/16		2016/17 (as of 12/01/16)		
					Shipments	Out-standing	Total
Data source	Census ¹	Export sales ²	Census ¹	Export sales ²		Export sales ²	
Country:							
China	331	332	609	764	553	180	733
Japan	3,054	3,121	2,499	2,434	1,286	253	1,539
Mexico	2,842	2,721	2,503	2,318	1,271	597	1,867
Nigeria	1,790	1,904	1,457	1,401	591	265	855
Philippines	2,376	2,338	2,077	2,118	1,503	444	1,946
Korean Rep.	1,181	1,148	1,093	1,074	567	443	1,010
Egypt	156	387	99	42	0	45	45
Taiwan	983	1,002	1,129	1,034	568	166	734
Indonesia	691	643	666	608	484	170	654
Venezuela	457	438	252	239	215	30	245
European Union	658	724	831	934	407	44	451
Total grain	22,610	22,622	20,467	19,440	13,049	6,320	19,369
Total (including products)	23,249	22,693	21,117	19,544	13,128	6,350	19,478
USDA forecast of Census				21,094			26,535

¹Source: U.S. Department of Commerce, U.S. Census Bureau.

²Source: USDA, Foreign Agricultural Service, *U.S. Export Sales*.