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Wheat Outlook

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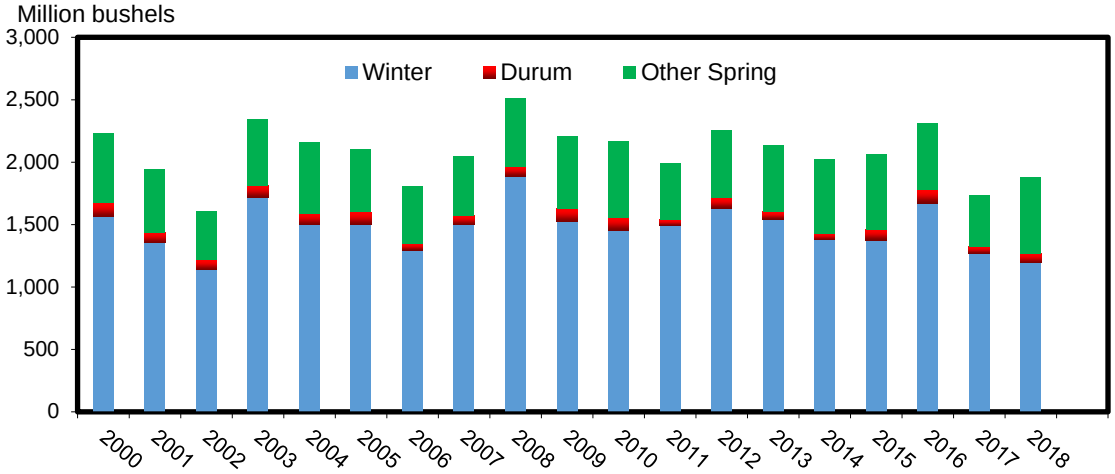
U.S. 2018/19 Other Spring Wheat Production Lifted on Record Yields, All-Wheat Exports Boosted

Vastly improved weather from a year ago has helped lift the projected yield for U.S. other spring wheat to a new high of 47.6 bushels per acre. Record yields combine with a 27-percent increase in projected harvested area to raise other spring production to more than 613 million bushels. Expanded U.S. spring wheat production, a lower season-average all wheat farm price, and reduced production from foreign competitors—EU (down 4.4 million tons from June forecast), Australia (down 2 million), Russia (down 1.5 million), and Ukraine (down 1 million)— increase opportunities to market the 2018/19 crop. Consequently, U.S. marketing-year exports are raised 25 million bushels this month to 975 million, up nearly 75 million from 2017/18.

Figure 1: U.S. wheat production by class



Source: USDA, National Agricultural Statistics Service. *Quickstats database.*

Domestic Outlook

Domestic Changes at a Glance:

- Based on the USDA-NASS *Acreage* and July *Crop Production* reports, U.S. all-wheat production in 2018 is up 8 percent and nearly 141 million bushels from 2017.
- Other spring wheat production is up 32 percent from 2017/18 based on a 27-percent increase in projected harvested area and expected record-high yields.
    - Year-to-year growth in other spring wheat production is largest in Montana (up 49 percent) and North Dakota (up 50 percent).
- Winter wheat production is raised slightly from the June projection and is now forecast at 1,881 million bushels.
    - Hard red winter wheat production is increased 10.3 million bushels from the June forecast; soft red winter wheat production is reduced 12.3 million bushels; white winter wheat production is raised 3.0 million bushels.
- U.S. 2018/19 all-wheat supplies are lifted 74 million bushels this month, largely on production increases as well as a 20-million-bushel increase in carry-in stocks.
- Expanded supplies result in a 10-million-bushel increase in all-wheat feed and residual use, now projected at 130 million bushels for the new marketing year.
- Reduced wheat production for several foreign competitors helps to boost U.S. exports by 25 million bushels this month to 975 million.
- Expanded wheat supplies more than fulfill the combined 35-million-bushel increase for total use, resulting in a near 40-million-bushel boost to 2018/19 all-wheat carry-out.
- Higher ending stocks and a lower corn price—down 10 cents this month—put downward pressure on the U.S. all-wheat season-average farm price (SAFP).
    - For 2018/19, the U.S. all-wheat SAFP is $5.00 per bushel, versus $4.73 per bushel in 2017/18.
- The first balance sheets for the five classes of wheat were released in the July *World Agricultural Supply and Demand Estimates* report.

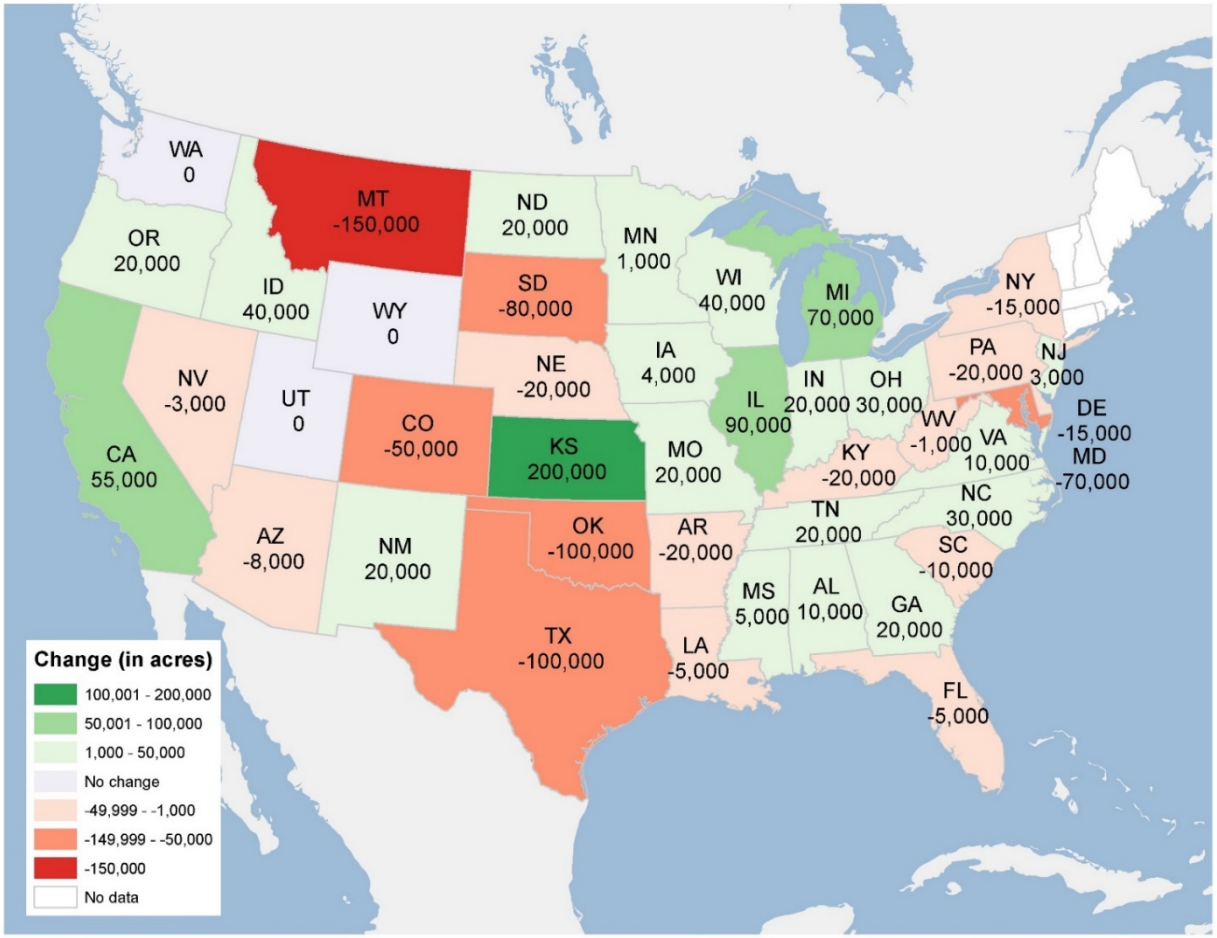
Table 1 - U.S. wheat supply and utilization at a glance 2017/18 and 2018/19					
Balance sheet item	**2017/18**	**2018/19 (June)**	**2018/19 (July)**	**2018/19 Change from previous month**	**2018/19 Comments**
Supply, total	*Million bushels*				***May-June Marketing Year (MY)***
Beginning stocks	1,180.6	1,080.2	1,100.3	20.1	Carry-out from 2017/18 marketing year is increased based on June 29 USDA-NASS, *Grain Stocks* report.
Production	1,740.6	1,827.5	1,881.4	54.0	New crop production is raised this month on significantly higher projected other spring production and slight increases to winter and durum production.
Imports	155.0	135.0	135.0	0.0	
Supply, total	3,076.2	3,042.7	3,116.7	74.1	Increased beginning stocks and forecast production lift total supplies by 74 million bushels.
Demand					
Food	963.0	965.0	965.0	0.0	In August, USDA-NASS will release the *Flour Milling Products* report, providing data to round out the 2017/18 marketing year food use estimate and inform the 2018/19 forecast.
Seed	64.4	62.0	62.0	0.0	
Feed and residual	49.8	120.0	130.0	10.0	Increased production and lower prices provide support for expanded feed and residual in the new marketing year.
Domestic, total	1,077.2	1,147.0	1,157.0	10.0	
Exports	901.1	950.0	975.0	25.0	Reduced net foreign production combines with higher year-to-year global food, seed, and industrial wheat use to create marketing opportunities for U.S. wheat exports in 2018/19.
Use, total	1,978.3	2,097.0	2,132.0	35.0	Higher supplies of U.S. wheat more than offset increased feed and residual and export use.
Ending stocks	1,100.3	945.7	984.7	39.1	Ending stocks are raised nearly 40 million bushels, but remain below 2017/18 levels. A lower corn price also supports a 10 cent reduction in the all wheat season-average-farm price.
Source: USDA, World Agricultural Outlook Board.					

First 2018/19 Balance Sheets by Wheat Class Released in July WASDE

In concert with USDA-NASS's release of 2018/19 wheat-by-class projected production, the July WASDE contained the first forecasts of wheat-by-class supply and utilization for the new marketing year. Wheat-by-class supplies and distribution are reflective of vastly different production scenarios, as compared to 2017, and expectations of generally more favorable wheat export prospects.

Planted area and production of **hard red winter (HRW)** wheat and winter wheat altogether are down in a number of key States (figure 2). Declines in Montana, Oklahoma and Texas reflect drops in harvested area. While HRW production is forecast down more than 92 million bushels, all domestic categories of use are projected up. In its July 6 release, Plains Grains Incorporated reports that, to date, samples from the 2018/19 hard red winter wheat crop averaged 12.8 percent protein as compared to 11.4 percent for the 2017/18 crop. Exports are forecast to fall slightly in 2018/19, based largely on reduced supplies. However improved international marketing prospects, due to reduced production from major global competitors, help to buffer U.S. export prospects from further declines. In 2018/19, growth in domestic HRW use is expected to combine with reduced supplies to lower ending stocks by 164 million bushels.

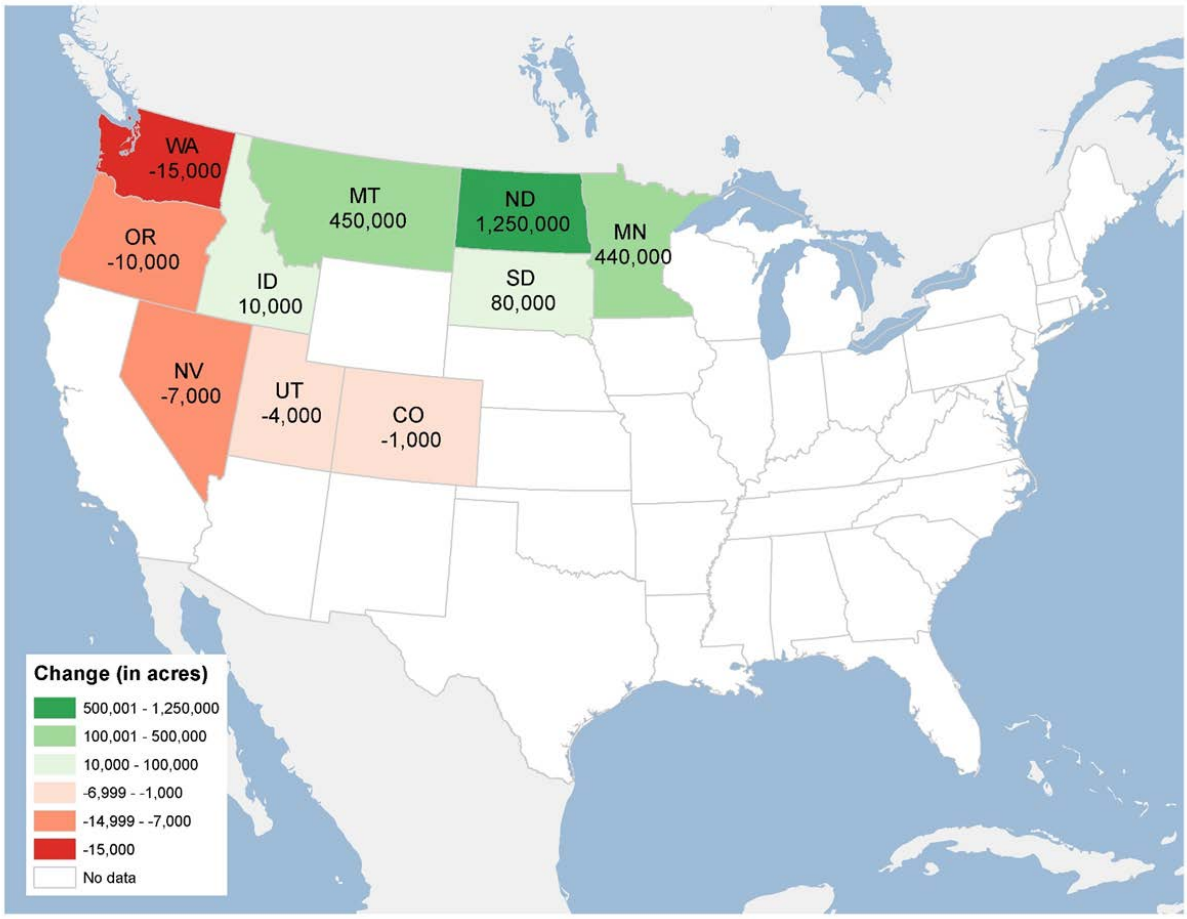
Figure 2: Change in U.S. winter wheat planted area, 2018 v. 2017



Source: USDA, National Agricultural Statistics Service QuickStats database.

Based on greater planted/harvested area and improved yields, **hard red spring** wheat production is forecast nearly 200 million bushels higher from 2017/18 (figure 3). Last year, drought in the Northern Plains reduced other spring yields to 41 bushels per acre. On July 18, 2017, *U.S. Drought Monitor* indicated that a substantial portion of eastern Montana, western North Dakota, and northern South Dakota were in D4—the most severe form of drought. The latest *Drought Monitor* (July 10, 2018) indicates that all of the regional D4 and D3 drought has abated, leaving just a few pockets of abnormally dry area in North Dakota. Improved conditions and the expectation of a substantial increase in domestic HRS production are expected to curtail demand for supplementary spring wheat imports, largely sourced from the Western Provinces of Canada. HRS imports are forecast to fall by approximately 20 million bushels in 2018/19. With more abundant U.S. supplies and projected growth for global food, seed, and industrial use, U.S. exports of HRS in 2018/19 are forecast up 42 million bushels from 2017/18 levels.

Figure 3: Other spring wheat planted area 2018 v. 2017



Source: USDA, National Agricultural Statistics Service QuickStats database.

At 302.8 million bushels, production of the 2018/19 **soft red winter** (SRW) crop is about 4 percent larger than the previous year (table 2) though down slightly month-to-month. Lower beginning stocks offset production gain and SRW supplies are projected to decline very slightly in 2018/19. Domestic use is expected to remain largely steady, with a slight increase in feed and residual use projected. Year-to-year exports are projected to rise by 34 million bushels.

Table 2: Winter wheat production by class

Winter wheat class	2017/18	2018/19 (June)	2018/19 (July)	Year-to-Year Change
	------Million bushels------			--%--
Hard red winter	750	650	657	-12
Soft red winter	292	316	303	4
Winter white	227	232	232	2

Source: USDA, National Agricultural Statistics Service, *Crop Production.*

Aggregate **white wheat** production is forecast to rise slightly, up about 5 million bushels from last year, exclusively on expanded production of **soft white winter** wheat (SWW). Production of SWW is forecast to rise more than 8 million bushels on greater harvested area in the key Pacific Northwest growing region. Production of all other classes of white wheat are down a collective 3.8 million bushels.

2018	**HRW**	**SRW**	**HWW**	**SWW**
Planted area (million acres)	23.22	5.84	0.60	3.03
Harvested area (million acres)	16.86	4.53	0.53	2.90
Yield (bushels/acre)	38.7	69.59	40.73	72.39
Production (million bushels)	657.37	302.81	21.05	211.32

2017	**HRW**	**SRW**	**HWW**	**SWW**
Planted area (million acres)	23.42	5.73	0.58	2.94
Harvested area (million acres)	17.64	4.31	0.52	2.81
Yield (bushels/acre)	42.53	67.66	45.45	72.29
Production (million bushels)	750.33	292.15	23.72	203.22

A production cut in Australia is expected to support U.S. exports of white wheat into key Asian markets in 2018/19. Further, the recent announcement of a GMO contamination in Alberta, Canada may support additional sales of U.S. wheat to Japan. Canadian wheat sales to Japan have been halted in the wake of an investigation into the scope of the contamination.

Despite a 322,000-acre decline in area planted, **durum** wheat production is set to rebound by nearly 20 million bushels, or 36 percent, for the 2018/19 marketing year, based on improved yields. In 2017, yields per acre were estimated at 16 and 24 bushels in Montana and North Dakota; for 2018, yields are projected at 32 and 39 bushels per acre, respectively. The boost in yields is aided by improved weather and soil moisture. Improved domestic production is expected to reduce demand for Canadian durum; U.S. imports of the grain are forecast to drop by 11 million bushels in 2018/19. Reduced domestic use, down 4 million bushels, partially offsets gains in the export market—up 7.5 million bushels—and results in a near-5-million-bushel increase in 2018/19 ending stocks.

Grain Stocks Report Reveals Sluggish HRW Use in Final Quarter of 2017/18 Marketing Year

The June 29 USDA-NASS *Grain Stocks* report was largely viewed as neutral by the industry and did not contain any major surprises for wheat. The USDA-NASS forecast for June 1 stocks raised carryout for the 2017/18 marketing year by approximately 20 million bushels. This increase, and the location of stocks, compelled a 40-million-bushel expansion in projected HRW ending stocks and a corresponding reduction to feed and residual use.

The net lift in carryout from the 2017/18 marketing year raises beginning stocks for 2018/19. Larger beginning stocks combine with an increase in all wheat production to boost supplies for the new marketing year by 74 million bushels. Advances in export use offset some of the supply gains, resulting in a net 39-million-bushel increase in 2018/19 ending stocks. Despite increased stocks, the stocks-to-use ratio for 2018/19, at 46.2 percent, is greatly improved from the 55.6 percent realized for the 2017/18 crop.

Greater slack in the balance sheet, as compared to last month, along with a 10-cent-per- bushel decrease in the 2018/19 corn price, put downward pressure on the all-wheat price, now projected at $5.00/bushel at the midpoint with a range of $4.50 to $5.50. This compares to the preliminary marketing-year average (MYA) of $4.73 per bushel that farmers are reported by NASS to have received in 2017/18. (Previously, the final U.S. MYA price was reported in the late June edition of the USDA-NASS *Agricultural Prices* report; this MYA price will now be released in the August report.)

International Outlook

European Union Leads Decline in Wheat Production

Global wheat production in 2018/19 is projected down 8.4 million tons this month to 736.3 million. Foreign production is reduced by 9.9 million tons to 685.1 million, while the forecast for U.S. winter wheat production is up 1.5 million tons. This leaves foreign wheat production 25.5 million tons lower than estimated for the previous year. Persistent hot and dry weather has reduced wheat production prospects across the globe in several major exporting countries.

The **European Union** dominates this month's decline with a reduction of 4.4 million tons to 145.0 million. Heat and dryness in the northern-tier European countries spread in June from the UK through Germany and Poland to the three Baltic countries and Sweden, with precipitation as low as 20 percent of normal. In contrast, lingering wetness in the eastern EU continues to impact the wheat crop. In France, heavy rains a month ago led to infestation (orange blossom midge) and fusarium that can damage wheat yields. Partly offsetting these reductions is increased wheat output in Spain, where abundant moisture has benefited all crops.

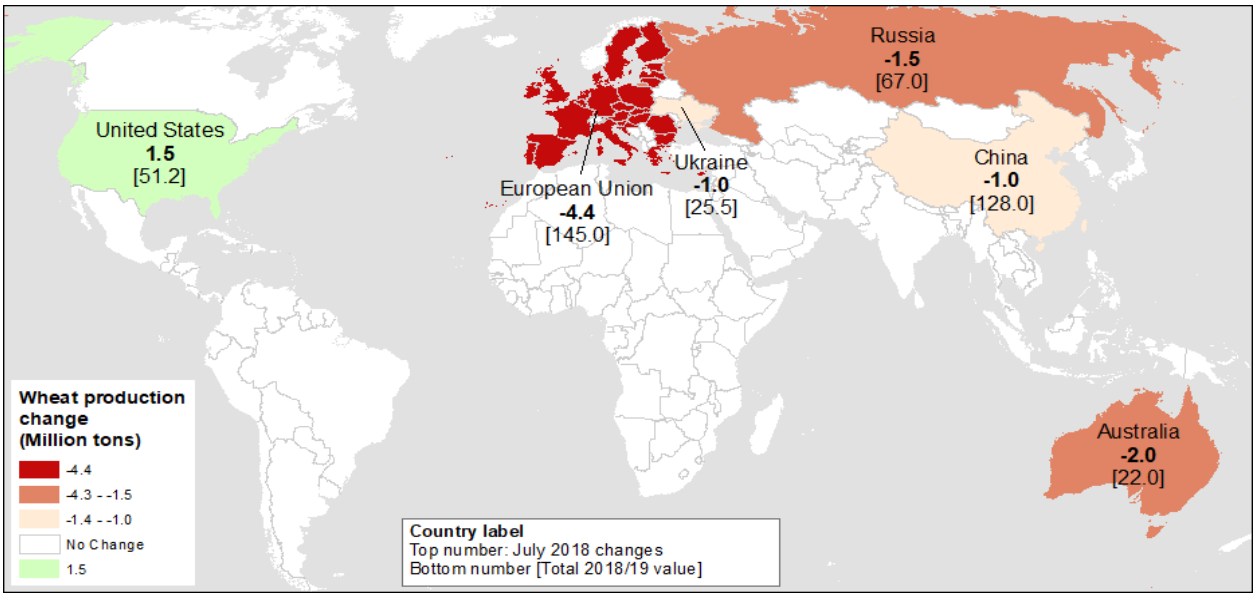
Wheat in **Australia** has just been planted amid very dry weather (planting into dust), especially in the eastern States of Queensland and New South Wales that together produce almost 40 percent of the country's wheat. The drought is most pronounced along the border between these two States, with minimal rain since the end of April. This region alone produces about 20 percent of Australian wheat. June precipitation was about 50 percent of normal in most Australian wheat-producing regions. With low subsoil moisture and no rain forecast, wheat yields are trimmed this month. Dry planting also reduced wheat area prospects to 12.0 million hectares, in line with updated estimates from ABARES (the Australian Bureau of Agricultural and Resource Economics and Sciences). Projected wheat production is down 2.0 million tons this month to 22.0 million.

Winter wheat harvesting in **Russia** started 10 days earlier than usual with heat-accelerated maturation of the crop. Harvest reports show a 17-percent decline in wheat yields compared to last year's record, achieved on nearly the same amount of harvested area. Satellite-derived vegetative indices confirm sustained damage from heat and dryness to the winter wheat crop in the southwestern part of Russia extending east into the Volga district. Winter wheat output is reduced 2.5 million tons this month, 12.5 million tons lower than a year ago.

Planting for spring wheat, which grows mainly in the eastern part of Russia, is complete, with reports indicating higher than expected harvested spring wheat area, up 0.5 million hectares this month to 11.5 million. Spring wheat yields are unchanged as the weather has been average to good. Spring wheat output is projected 1.0 million tons higher this month, and 5.5 million tons lower than last year. Total wheat output in Russia is reduced this month by 1.5 million tons to 67.0 million, 18.0 million tons below last year's record production. Persistent dryness and heat in the **Ukrainian** wheat-producing areas bordering southern Russia, especially in the Steppe zone, and low yields in early harvest reports contribute to a drop in forecast yield, reducing Ukraine's forecast wheat production 1.0 million tons to 25.5 million.

Production prospects in **China** are also are down 1.0 million tons this month to 128.0 million, a decrease of 0.7 percent. The reduction is based on data from Chinese Provinces indicating lower estimated wheat area. Although the southern Chinese Provinces (Henan, Anhui) were drier than normal, yields there are not expected to be affected as almost all wheat in that part of China is irrigated. In contrast, major wheat producers in the North China plain (Shandong and Hebei) were suffering from excessive rains, with reported crop lodging that is expected to reduce the quality of the wheat harvest (see the feature on Chinese wheat quality below). For a visual display of the changes in wheat production this month, see map A.

Map A – Wheat production changes for 2018/19, July 2018



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

COUNTRY FOCUS – CHINA

China Wheat Sector Struggles with Chronic Quality Problem

Fred Gale, Economic Research Service

China is the second-largest wheat producer in the world after the European Union, but aggregate statistics mask a mismatch between the varieties of wheat grown in China and those demanded by its flour mills. China has an oversupply of wheat varieties that its farmers are accustomed to growing, but it has shortages of high-quality wheat types.

Quality Mismatch

China's farmers grow mainly moderate-gluten varieties suited for traditional noodles, steamed bread, and dumplings. Demand for these products is stagnant or even declining as consumers add new types of food to their menus. Among the items with growing sales are western-style breads, instant noodles, hamburger buns, and snack foods that require flour with strong- and low-gluten wheat. As China's diets have become more Westernized and protein based, the demand for bread wheats has increased while the demand for lower-protein wheats for traditional noodles and dumplings has declined.

A Chinese Academy of Agricultural Sciences study found that 68.7 percent of wheat samples collected during 2006-15 had medium levels of gluten and 16.7 percent had moderately strong gluten (Hu and others, 2016). Only 12.6 percent met standards for strong gluten and 2 percent rated as weak gluten. The study found a decline in the proportion of wheat meeting strong gluten standards despite longstanding efforts to address the problem that include breeding new varieties and offering subsidies for the adoption of high-quality seeds.

Sprouting and fungal diseases in newly harvested wheat caused by heavy rains and hail around harvest time are also affecting wheat quality in China. In recent years, excessive moisture and lodging degraded significant volumes of wheat that could only be used as animal feed or mixed with other wheat to make low-grade flour. The Research Center for Rural Economy (2017) reported that this problem was most widespread during 2016, when only 25 percent of wheat met standards for grade 3 or higher.

Table—China wheat grades

Grade	Test weight	Imperfect kernels	Foreign matter	Mineral foreign matter	Moisture	Color and odor
	Grams/liter	Percent	Percent	Percent	Percent	NA
1	≥790	≤6.0				
2	≥770	≤6.0				
3	≥750	≤8.0	≤1.0	≤0.5	≤12.5	Normal
4	≥730	≤8.0				
5	≥710	≤10.0				

Source: Compiled by ERS from China national wheat quality standard GB1351-2008.

A Persistent Problem

China's quality mismatch problem has persisted for years. Two decades ago, ERS reported that Chinese officials were taking measures to expand production of high quality wheat to address the same quality mismatch problems officials are still grappling with this year (Hsu et al., 2001). Despite breeding efforts, seed subsidies, and the promotion of flour mill-farmer contracts, the problem has persisted.

The Research Center for Rural Economy (2017) cited several reasons for low adoption of high-quality wheat varieties. First, several wheat varieties were vulnerable to disease, lodging, and variable quality. Second, high-quality varieties require more labor input, a strong deterrent for farmers who spend most of their time working off-farm.

The Research Center for Rural Economy also faulted China's support price policy for inducing farmers to plant wheat to maximize yields with little regard for quality. The price support program has accumulated a large stockpile of wheat—mostly low-quality—while prices of high-quality wheat have risen.

Renewed Attention on Wheat Quality

Chinese officials announced another grain quality campaign during 2018 when the central leadership's "Document Number 1" called for producing more strong- and weak-gluten wheat as a rural policy priority. This year, State news media frequently cited a new emphasis on grain quality in national food security policy in place of the traditional focus on producing adequate quantities.

New rules for China's wheat and rice price support program issued in May 2018 specified stricter criteria for purchasing grain at minimum prices. The revised program explicitly forbids purchasing grain below grade 3, and advises Provincial Governments to launch their own program to buy low-grade grain when farmers have large volumes they cannot easily sell. The document includes admonitions to prevent grain-related food safety problems, apparently a reference to mycotoxin problems arising from high moisture and mold.

The quality of the 2018 winter wheat crop in China varied widely. Heavy rains in the southern portion of the wheat belt resulted in large volumes of low-grade wheat, especially in Hubei Province where authorities launched a program to buy up wheat below grade 3. Prices of low-grade wheat were reported at $258-$280 per metric ton (at an exchange rate of 6.6 Chinese yuan per dollar). A tight supply of milling-grade wheat eased when better-quality wheat from northern Henan, Shandong and Hebei Provinces were marketed. Prices of $364-$374 per metric ton in those Provinces exceeded the support price of $348. High-quality wheat varieties brought prices of $400-$407 per metric ton, a premium of 8-10 percent over standard wheat.

Overall, the pace of wheat sales during the first post-harvest month was down by a third from the previous year, which seems to reflect reduced government procurement due to higher prices and stricter criteria for support-price purchases. While three Provinces launched minimum price purchases, government intervention accounted for a smaller proportion of wheat purchases than in recent years. In Anhui Province, for example, only 10 percent of wheat purchases were made by the price support program.

Imports Reflect Demand for Quality

While China has excess supplies of wheat overall, the country's demand for imports reflects needs for high-quality wheat. Demand is strong, but a tariff-rate quota negotiated under China's WTO accession restricts import volumes.

USDA projections anticipate modest growth in China's wheat imports from 3 million tons in 2017/18 to 4.5 million tons in 2027/28. However, China's own projections issued this year are based on optimism that the country's wheat quality will improve. According to a report by Market

Early Warning Committee (2018), China's wheat imports will gradually fall to 2.7 million tons by 2017/28 as domestic quality improves.

A Chinese Academy of Agricultural Sciences (2018) study did not address the quality issue, but it projected that a 10.5-percent decline in per capita wheat consumption would prevent large increases in imports by 2035. The study highlighted the role of Chinese price support by estimating that a 10-percent reduction in the price support would increase imports by over 200 percent.

In summary, China's wheat producers are lagging in their adaptation to changing consumption needs, such as for breads, noodles, snacks, and other flour-based foods. Domestic producers are not likely to meet needs for high-quality wheat in the near term. Officials continue to insist that near-self-sufficiency in wheat is necessary as a food security policy despite the declining role of wheat in Chinese diets. Under this policy, officials are likely to continue limiting imports to 3-4 million tons annually.

These imports are mostly supplied by Australia, Canada, and the United States, which are all high-quality wheat suppliers. Until China's improves its own wheat quality, these three exporters should continue as the dominant suppliers in the future.

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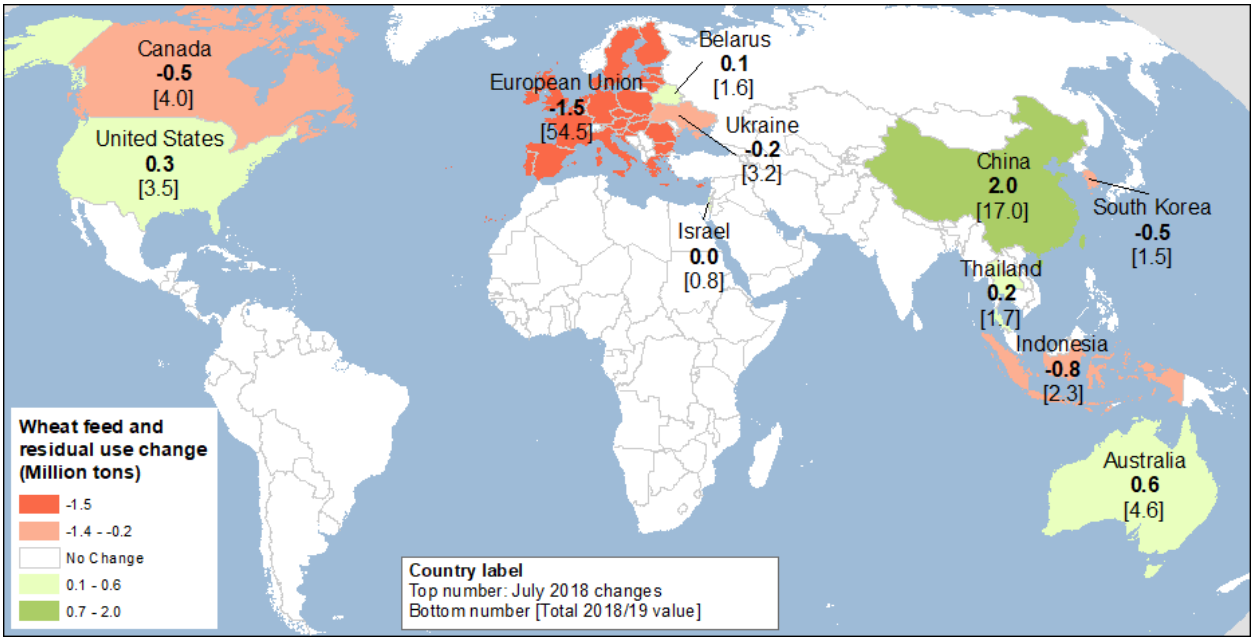
Reduced Supplies Trim Ending Stocks Despite Lower Use

The decline in the foreign consumption forecast this month partly offsets lower supplies, moderating a decline in projected foreign ending stocks to 6.3 million tons.

Forecast 2018/19 foreign wheat consumption dropped 2.3 million tons this month. A 1.5-million-ton reduction in wheat feeding in the European Union reflects lower supplies. Wheat feed use is reduced in the price-sensitive market of South Korea, down 0.5 million tons, as the country is expected to shift its feeding to lower priced corn. In Indonesia, both wheat feeding and food use are expected to decline by 0.8 and 0.6 million tons, respectively. In the last several years, the country has circumvented a ban on imported feedstuffs by bringing in low-quality milling wheat from the Black Sea countries. However, in 2018 wheat imports dropped considerably, and the decline is expected to affect wheat feeding in Indonesia. Wheat feeding is increased in China this month by 2.0 million tons, reflecting increased use of low-quality wheat and partly offsetting reduced sorghum feeding. Wheat feeding in Australia is also projected up 0.6 million tons, despite lower production, as the country is now using more wheat domestically rather than exporting it in low-output years. For a visual display of the changes in wheat feed and residual use this month, see map B.

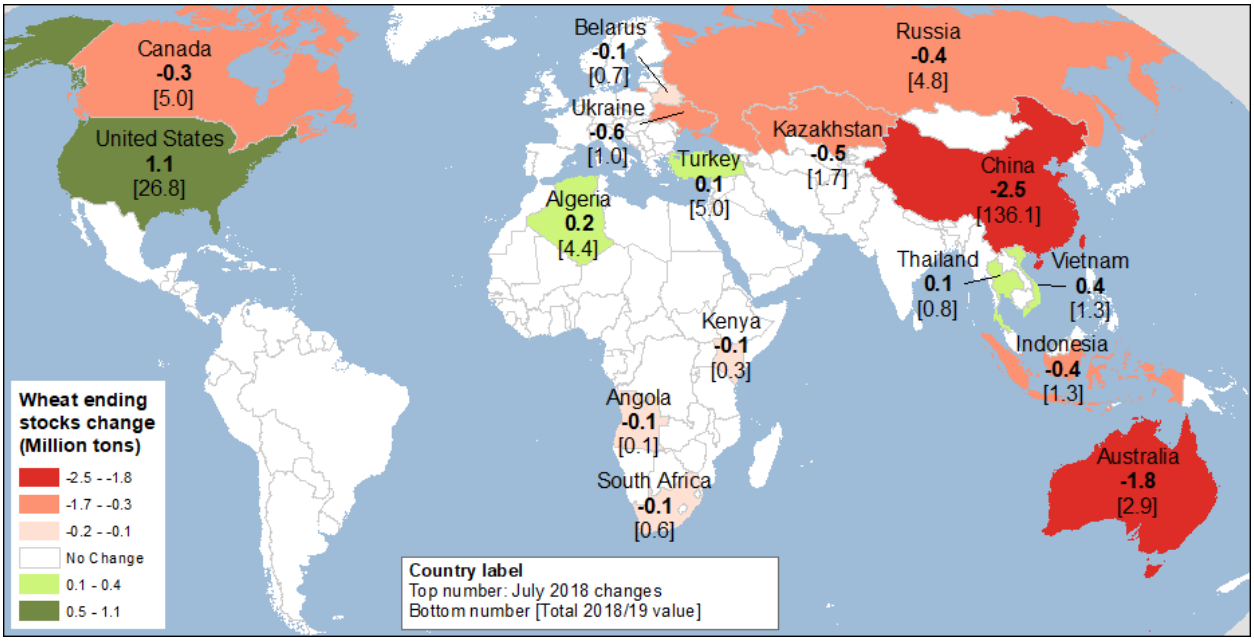
Map B – Wheat feed and residual use changes for 2018/19, July 2018



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

Projected 2018/19 world wheat ending stocks are down 5.3 million tons this month to 260.9 million; foreign stocks are down 6.3 million tons, and U.S. stocks are projected to increase. Changes in stocks follow multiple revisions in production, consumption, and trade. In China, ending stocks are forecast down 2.5 million tons to 136.1 million, due to lower production and higher feed use, partly offset by higher imports. Stocks are projected 1.8 million tons lower for Australia (lower production and higher feed use). Ending stocks are also projected lower for Indonesia (reduced imports), Kazakhstan (higher exports), and Russia (reduced production and lower beginning stocks, partly offset by decreased exports and consumption). For a visual display of the monthly changes in wheat ending stocks, see map C below.

Map C – Wheat ending stocks changes for 2018/19, July 2018



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

U.S. Export Prospects Boosted Due to Reduced Competition

World wheat trade for 2018/19 (July-June), though forecast down 1.1 million tons this month, would still set a record at 185.7 million tons.

A 0.5-million ton decline in projected imports for South Korea reflects higher projected wheat prices relative to corn and reduced incentives for wheat imports. Based on the pace of imports and consumption in 2017/18, Indonesian imports for 2018/19 are reduced for both years, down 1.5 and 1.0 million tons, respectively. China's imports are expected to be 0.5 million tons higher, as a lower quality harvest increases the need for imports of high-quality milling wheat (see the feature on Chinese wheat quality).

Significant reductions in production and export prospects for the European Union, Russia, Ukraine, and Australia provide additional support for higher 2018/19 U.S. wheat exports.

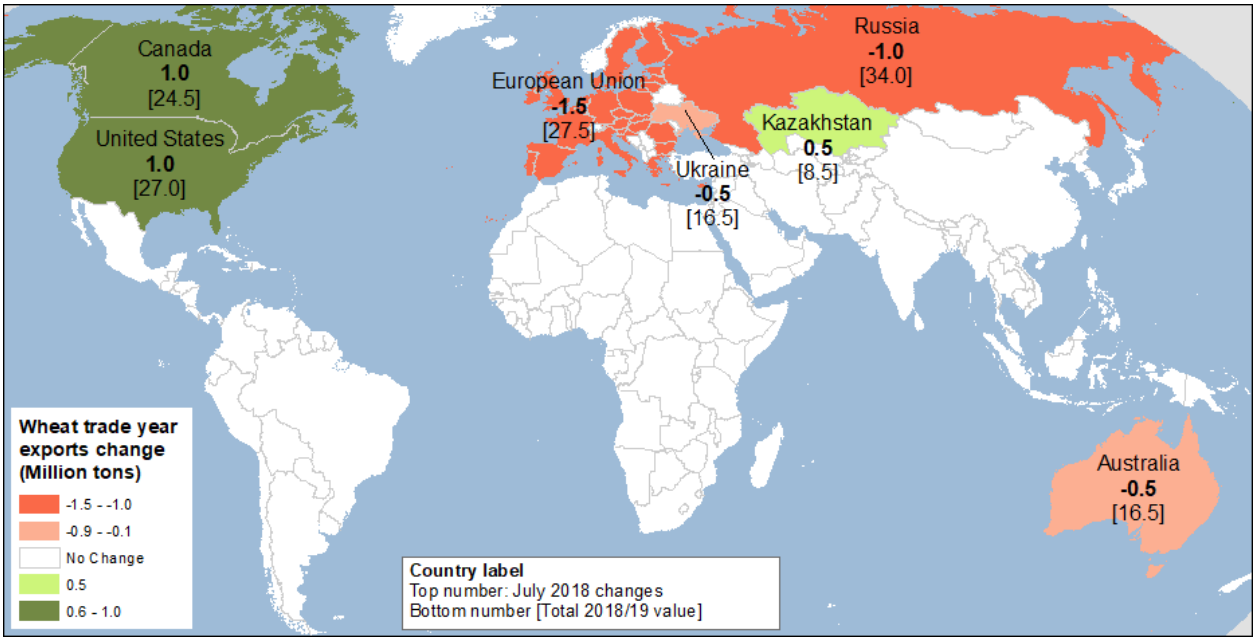
Projected wheat exports by the European Union are cut 1.5 million tons this month, to 27.5 million, due to reduced production in such countries as France, UK, Germany, Poland, and the Baltic States. In Russia, major losses are expected to occur in the main wheat-exporting regions of the South, where prices have been increasing for some time. Lower production prospects in Australia contributed to a 0.5-million-ton cut in forecast exports, to 16.5 million (down 1.0 million tons for the local October-September marketing year). An equivalent reduction

in exports is projected for Ukraine, down 0.5 million tons to 16.5 million. These reductions in production prospects and exports provide additional support for higher export forecasts for Canada and the United States. Given higher Canadian projected wheat supplies amid lower Australian and FSU (Russia and Ukraine) wheat production/stocks, Canadian wheat is expected to be competitive in 2018/19, and its exports are projected to be up 1.0 million tons to 24.5 million.

Higher U.S. wheat production this month and higher beginning stocks bring U.S. wheat supplies 2.0 million tons ahead of last month. Reduced competition from Australia and the Black Sea countries boost prospects for U.S. wheat exports in 2018/19. The July-June U.S. export projection is increased 1.0 million tons this month to 27.0 million, with June-May local marketing year exports up 25 million bushels to 975 million.

For a visual display of the changes in wheat trade year exports, see map D below.

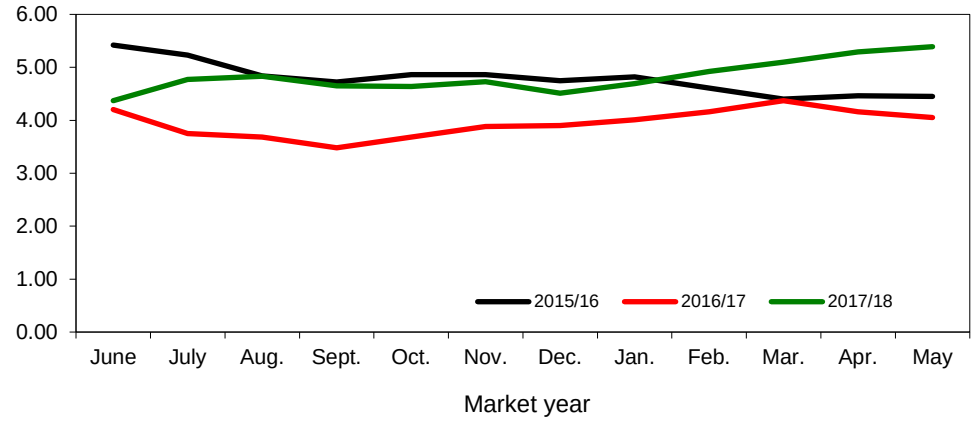
Map D – Wheat trade year exports changes for 2018/19, July 2018



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

Figure 1
All wheat average prices received by farmers

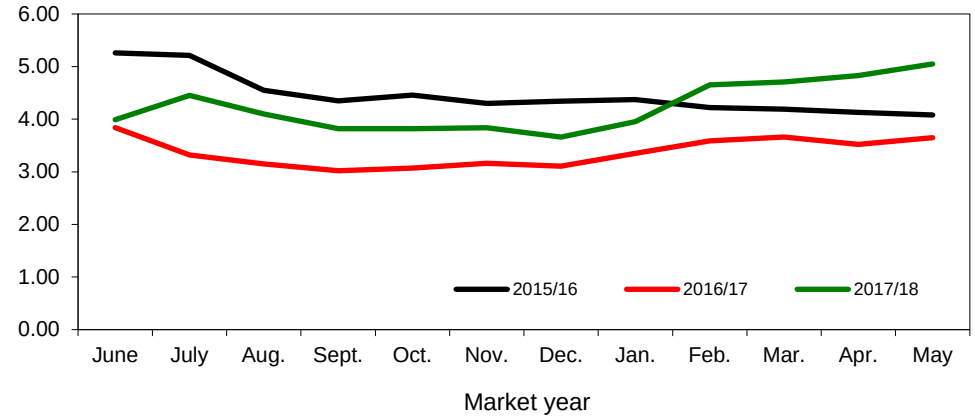
Dollars per bushel



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

Figure 2
Hard red winter wheat average prices received by farmers

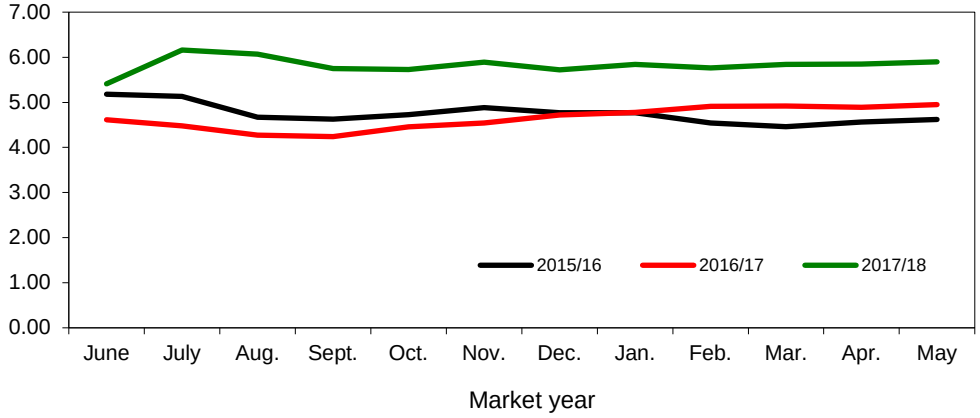
Dollars per bushel



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

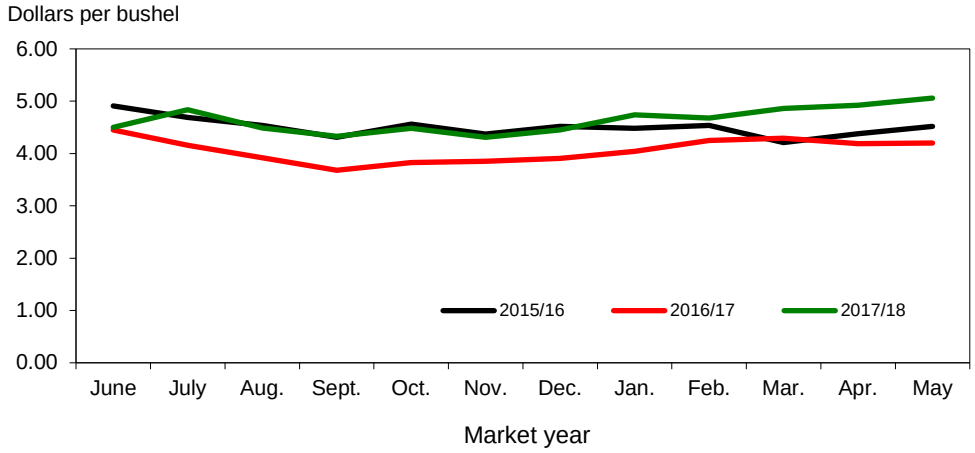
Figure 3
Hard red spring wheat average prices received by farmers

Dollars per bushel



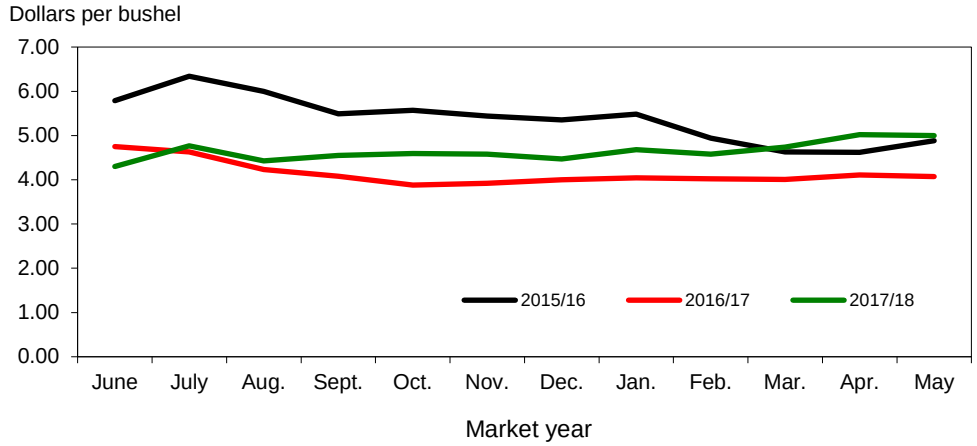
Source: USDA, National Agricultural Statistics Service, *Agricultural Prices*.

Figure 4
Soft red winter wheat average prices received by farmers



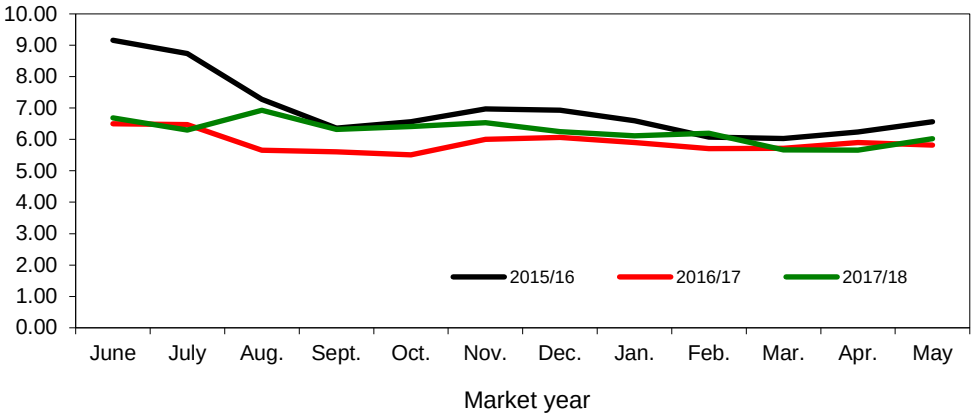
Source: USDA, National Agricultural Statistics Service, *Agricultural Prices*.

Figure 5
Soft white wheat average prices received by farmers



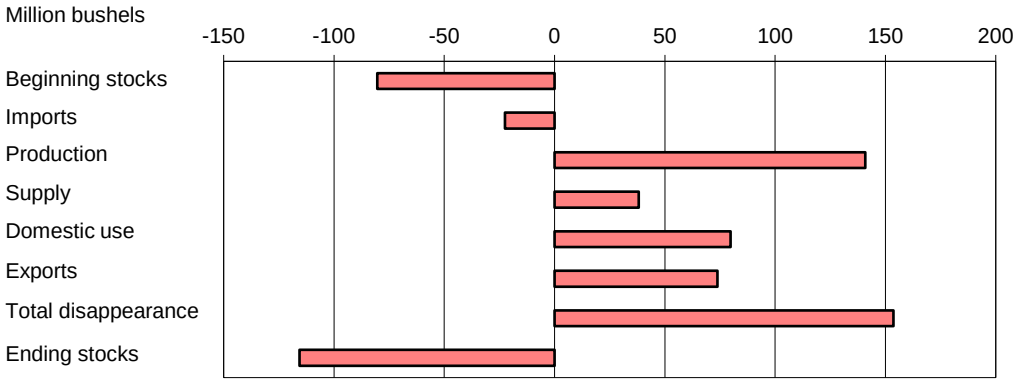
Source: USDA, National Agricultural Statistics Service, *Agricultural Prices*.

Figure 6
Durum wheat average prices received by farmers



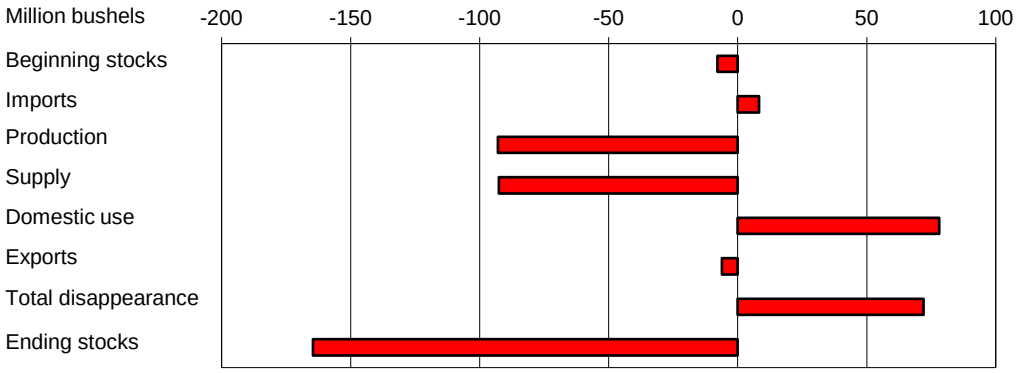
Source: USDA, National Agricultural Statistics Service, *Agricultural Prices*.

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



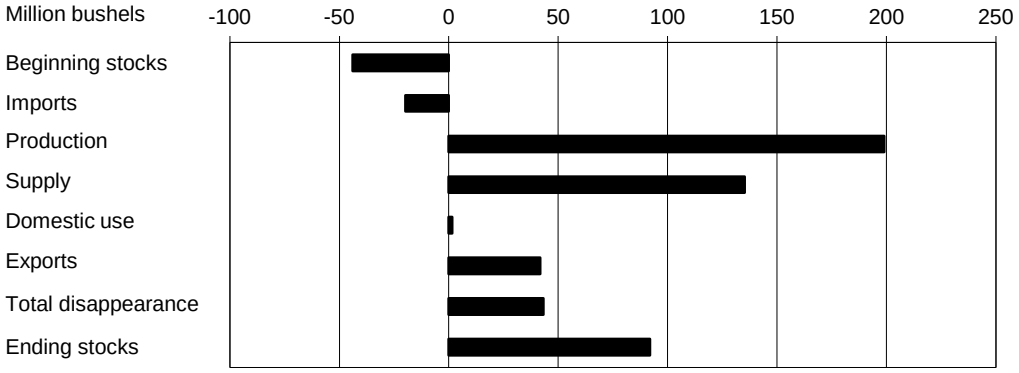
Source: USDA, World Agricultural Outlook Board, *World Agricultural Supply and Demand Estimates.*

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.*

Table 1--Wheat: U.S. market year supply and disappearance, 6/14/2018

Item and unit		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
Area:								
Planted	Million acres	55.3	56.2	56.8	55.0	50.1	46.0	47.3
Harvested	Million acres	48.8	45.3	46.4	47.3	43.9	37.6	38.9
Yield	Bushels per acre	46.2	47.1	43.7	43.6	52.7	46.3	46.9
Supply:								
Beginning stocks	Million bushels	742.6	717.9	590.3	752.4	975.6	1,180.6	1,080.2
Production	Million bushels	2,252.3	2,135.0	2,026.3	2,061.9	2,308.7	1,740.6	1,827.5
Imports [1]	Million bushels	124.3	172.5	151.2	112.7	118.1	155.0	135.0
Total supply	Million bushels	3,119.2	3,025.3	2,767.8	2,927.1	3,402.5	3,076.2	3,042.7
Disappearance:								
Food use	Million bushels	950.8	955.1	958.3	957.1	949.0	963.0	965.0
Seed use	Million bushels	73.1	75.6	79.4	67.2	61.3	63.0	62.0
Feed and residual use	Million bushels	365.3	228.2	113.4	149.4	156.5	70.0	120.0
Total domestic use	Million bushels	1,389.3	1,258.8	1,151.1	1,173.7	1,166.7	1,096.0	1,147.0
Exports [1]	Million bushels	1,012.1	1,176.2	864.3	777.8	1,055.1	900.0	950.0
Total disappearance	Million bushels	2,401.4	2,435.1	2,015.4	1,951.5	2,221.9	1,996.0	2,097.0
Ending stocks	Million bushels	717.9	590.3	752.4	975.6	1,180.6	1,080.2	945.7
CCC inventory	Million bushels					.0		
Stocks-to-use ratio		29.9	24.2	37.3	50.0	53.1	54.1	45.1
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	73.70	72.80	56.40	56.40	56.50	56.50	56.50
Farm price [2]	Dollars per bushel	7.77	6.87	5.99	4.89	3.89	4.75	4.60-5.60
Market value of production	Million dollars	17,383	14,604	11,915	10,203	8,981	8,268	9,320

Latest market year is projected; previous market year is estimated. Totals may not add due to rounding.
[1] Includes flour and selected other products expressed in grain-equivalent bushels.
[2] U.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: 6/13/2018

Table 2--Wheat by class: U.S. market year supply and disappearance, 6/14/2018

Market year, item, and unit			All wheat	Hard red winter[1]	Hard red spring[1]	Soft red winter[1]	White[1]	Durum
2017/18	Area:							
	Planted acreage	Million acres	46.01	23.43	10.50	5.73	4.05	2.31
	Harvested acreage	Million acres	37.59	17.64	9.67	4.32	3.82	2.14
	Yield	Bushels per acre	46.31	42.54	39.82	67.66	67.53	25.71
	Supply:							
	Beginning stocks	Million bushels	1,180.60	589.30	235.00	215.00	105.00	36.30
	Production	Million bushels	1,740.58	750.33	385.01	292.16	258.18	54.91
	Imports[2]	Million bushels	155.00	7.00	74.00	16.00	8.00	50.00
	Total supply	Million bushels	3,076.18	1,346.63	694.01	523.16	371.18	141.21
	Disappearance:							
	Food use	Million bushels	963.00	390.00	252.00	154.00	85.00	82.00
	Seed use	Million bushels	63.00	26.00	17.00	11.50	5.50	3.00
	Feed and residual use	Million bushels	70.00	20.00	.00	45.00	5.00	.00
	Total domestic use	Million bushels	1,096.00	436.00	269.00	210.50	95.50	85.00
	Exports[2]	Million bushels	900.00	370.00	225.00	90.00	195.00	20.00
	Total disappearance	Million bushels	1,996.00	806.00	494.00	300.50	290.50	105.00
	Ending stocks	Million bushels	1,080.18	540.63	200.01	222.66	80.68	36.21
2018/19	Supply:							
	Beginning stocks	Million bushels	1,080.18	540.63	.00	.00	.00	.00
	Production	Million bushels	1,827.49	650.37	.00	.00	.00	.00
	Imports[2]	Million bushels	135.00	15.00	.00	.00	.00	.00
	Total supply	Million bushels	3,042.68	1,206.00	.00	.00	.00	.00
	Disappearance:							
	Food use	Million bushels	965.00	390.00	.00	.00	.00	.00
	Seed use	Million bushels	62.00	27.00	.00	.00	.00	.00
	Feed and residual use	Million bushels	120.00	50.00	.00	.00	.00	.00
	Total domestic use	Million bushels	1,147.00	467.00	.00	.00	.00	.00
	Exports[2]	Million bushels	950.00	345.00	.00	.00	.00	.00
	Total disappearance	Million bushels	2,097.00	812.00	.00	.00	.00	.00
	Ending stocks	Million bushels	945.68	394.00	.00	.00	.00	.00

Latest market year is projected; previous market year is estimated. Totals may not add due to rounding.
[1] Area and yield data are unpublished National Agricultural Statistics Service data. Supply and disappearance data, except production, are approximations.
[2] Includes 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: 6/13/2018

Table 3--Wheat: U.S. quarterly supply and disappearance (million bushels), 6/14/2018

Market year	and quarter	Production	Imports[1]	Total supply	Food use	Seed use	Feed and residual use	Exports[1]	Ending stocks
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	17	-25	282	590
	Mkt. year	2,135	172	3,025	955	76	228	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	113	864	752
2015/16	Jun-Aug	2,062	27	2,841	240	1	298	205	2,097
	Sep-Nov		27	2,124	249	44	-107	192	1,746
	Dec-Feb		34	1,780	230	2	2	175	1,372
	Mar-May		25	1,396	239	20	-43	205	976
	Mkt. year	2,062	113	2,927	957	67	149	778	976
2016/17	Jun-Aug	2,309	33	3,317	238	1	266	268	2,545
	Sep-Nov		30	2,575	245	41	-30	239	2,079
	Dec-Feb		25	2,104	228	1	-22	238	1,659
	Mar-May		31	1,690	238	19	-58	310	1,181
	Mkt. year	2,309	118	3,402	949	61	156	1,055	1,181
2017/18	Jun-Aug	1,741	42	2,963	239	2	170	286	2,266
	Sep-Nov		36	2,302	251	41	-55	193	1,873
	Dec-Feb		37	1,911	233	1	-19	201	1,494
	Mkt. year	1,741	155	3,076	963	63	70	900	1,080
2018/19	Mkt. year	1,827	135	3,043	965	62	120	950	946

Latest market year is projected; previous market year is estimated. Totals may not add due to rounding.
[1] Includes 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: 6/13/2018

Table 4--Wheat: Monthly food disappearance estimates (1,000 grain-equivalent bushels), 6/14/2018

Mkt year and month 1/		Wheat ground for flour	+	Food imports[2]	+	Nonmilled food use[3]	-	Food exports[2]	=	Food use
2016/17	Jun	73,149		2,933		2,000		2,150		75,932
	Jul	74,237		2,639		2,000		1,665		77,212
	Aug	81,136		3,198		2,000		1,856		84,478
	Sep	78,018		2,537		2,000		2,140		80,415
	Oct	81,469		2,968		2,000		2,325		84,111
	Nov	77,978		3,191		2,000		2,201		80,968
	Dec	73,195		2,863		2,000		1,868		76,190
	Jan	73,561		2,858		2,000		2,027		76,392
	Feb	72,977		2,301		2,000		1,978		75,300
	Mar	77,425		2,840		2,000		1,789		80,477
	Apr	74,812		2,828		2,000		1,534		78,105
	May	76,492		2,818		2,000		1,914		79,396
2017/18	Jun	73,183		3,248		2,000		1,822		76,610
	Jul	74,520		2,966		2,000		1,795		77,691
	Aug	81,444		3,151		2,000		2,107		84,488
	Sep	78,315		2,622		2,000		1,411		81,526
	Oct	82,325		3,243		2,000		1,133		86,434
	Nov	78,798		3,219		2,000		1,285		82,732
	Dec	73,964		2,941		2,000		1,563		77,341
	Jan	74,607		3,075		2,000		1,423		78,259
	Feb	74,014		2,948		2,000		1,589		77,374
	Mar	78,526		3,197		2,000		1,571		82,152
	Apr			3,259				1,432		1,826

[1] Current year is preliminary. Previous year is preliminary through August of current year, estimated afterwards.
[2] Food imports and exports used to calculate total food use. Includes all categories of wheat flour, semolina, bulgur, and couscous and selected categories of pasta.
[3] Wheat prepared for food use by processes other than milling.
 Estimated food use equals wheat ground for flour plus food imports plus nonmilled food use minus food exports. See http://www.ers.usda.gov/Briefing/Wheat/wheatfooduse.htm for more information.
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: 6/13/2018

Table 5--Wheat: National average price received by farmers (dollars per bushel) , 6/14/2018

Month	All wheat		Winter		Durum		Other spring	
	2016/17	2017/18	2016/17	2017/18	2016/17	2017/18	2016/17	2017/18
June	4.20	4.37	3.97	4.11	6.50	6.69	4.61	5.35
July	3.75	4.77	3.56	4.56	6.47	6.30	4.48	6.09
August	3.68	4.83	3.41	4.27	5.66	6.93	4.26	5.87
September	3.48	4.65	3.25	4.11	5.61	6.32	4.22	5.62
October	3.68	4.64	3.37	4.17	5.51	6.41	4.38	5.55
November	3.88	4.73	3.41	4.07	6.00	6.53	4.48	5.78
December	3.90	4.51	3.40	3.91	6.07	6.25	4.66	5.61
January	4.01	4.69	3.53	4.19	5.90	6.12	4.74	5.72
February	4.16	4.92	3.77	4.63	5.71	6.20	4.83	5.65
March	4.37	5.10	3.82	4.73	5.72	5.67	4.86	5.74
April	4.16	5.29	3.70	4.90	5.90	5.66	4.83	5.78
May	4.05		3.77		5.82		4.81	

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

Table 6--Wheat: National average prices received by farmers by class (dollars per bushel), 6/14/2018

Month	Hard red winter		Soft red winter		Hard red spring		White	
	2016/17	2017/18	2016/17	2017/18	2016/17	2017/18	2016/17	2017/18
June	3.84	3.99	4.45	4.50	4.61	5.41	4.75	4.30
July	3.32	4.45	4.16	4.84	4.48	6.16	4.63	4.77
August	3.15	4.10	3.92	4.49	4.27	6.07	4.23	4.43
September	3.02	3.82	3.68	4.33	4.24	5.75	4.08	4.55
October	3.07	3.82	3.83	4.48	4.46	5.73	3.88	4.59
November	3.16	3.84	3.85	4.31	4.54	5.89	3.92	4.58
December	3.11	3.66	3.91	4.45	4.72	5.72	4.00	4.47
January	3.35	3.95	4.04	4.74	4.78	5.84	4.04	4.68
February	3.59	4.65	4.25	4.68	4.91	5.76	4.02	4.58
March	3.66	4.71	4.29	4.86	4.92	5.84	4.01	4.74
April	3.52	4.83	4.19	4.92	4.89	5.85	4.11	5.02
May	3.65		4.20		4.95		4.07	

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

Date run: 6/13/2018

Table 7--Wheat: Average cash grain bids at principal markets, 6/14/2018

	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)	
Month	2016/17	2017/18	2016/17	2017/18	2016/17	2017/18	2016/17	2017/18
June	5.04	5.24	5.54	6.65	5.18	4.53	176.55	189.60
July	4.24	5.65	5.18	7.22	4.66	5.12	151.57	203.74
August	4.15	4.80	5.32	6.28	4.62	4.22	149.18	171.41
September	4.24	5.07	5.36	6.52	4.41	4.81	150.47	178.76
October	4.40	5.11	5.58	6.24	4.20	5.03	152.12	175.82
November	4.64	5.30	5.70	6.84	4.12	4.96	150.28	179.49
December	4.56	5.38	5.76	6.72	4.03	4.84	141.83	183.90
January	4.91	5.73	6.03	6.94	4.34	5.03	153.22	192.17
February	5.04	5.93	6.08	6.89	4.58	5.41	155.24	--
March	4.80	6.05	5.53	6.70	4.54	5.52	154.32	--
April	4.37	6.09	5.08	6.67	4.23	5.64	165.90	213.48
May	4.80	6.56	5.89	7.03	4.31	5.93	180.04	--
	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)	
	2016/17	2017/18	2016/17	2017/18	2016/17	2017/18	2016/17	2017/18
June	--	--	--	--	6.35	7.50	--	--
July	--	--	--	--	5.82	8.77	--	--
August	--	--	--	--	5.97	7.74	--	--
September	--	--	--	--	5.98	7.40	--	--
October	--	--	--	--	6.34	7.39	--	--
November	--	--	--	--	6.28	7.52	--	--
December	--	--	--	--	6.49	7.38	--	--
January	--	--	--	--	6.80	7.42	--	--
February	--	--	--	--	6.81	7.29	--	--
March	--	--	--	--	6.60	7.40	--	--
April	--	--	--	--	6.45	7.06	--	--
May	--	--	--	--	6.64	7.51	--	--
	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)	
	2016/17	2017/18	2016/17	2017/18	2016/17	2017/18	2016/17	2017/18
June	4.74	4.66	4.70	4.41	4.69	4.44	5.46	4.91
July	4.23	5.15	4.12	4.96	4.22	4.94	5.07	5.40
August	3.90	4.31	3.99	4.12	4.03	4.20	4.89	5.13
September	3.89	4.30	3.76	4.23	3.72	4.27	4.77	5.19
October	3.89	4.16	3.82	4.22	3.90	4.24	4.65	5.30
November	4.04	4.34	3.88	4.13	3.92	4.18	4.64	5.26
December	3.91	4.28	3.94	4.12	3.80	4.04	4.57	5.22
January	4.17	4.38	4.16	4.27	4.09	4.22	4.63	5.30
February	4.38	4.65	4.26	4.55	4.28	4.54	4.74	5.39
March	4.24	4.76	4.06	4.69	4.14	4.75	4.70	5.64
April	4.14	4.75	3.93	4.74	4.08	4.85	4.61	5.63
May	4.20	5.19	4.08	5.08	4.19	5.24	4.77	5.79

-- = Not available or no quote.

[1] Free on board.

Source: USDA, Agricultural Marketing Service, State Grain Reports, http://www.ams.usda.gov/AMSv1.0/ams.fetchTemplateData.do?template=TemplateS&navID=MarketNewsAndTransportationData&leftNav=MarketNewsAndTransportationData&page=LSMarketNewsPageStateGrainReports.

Date run: 6/13/2018

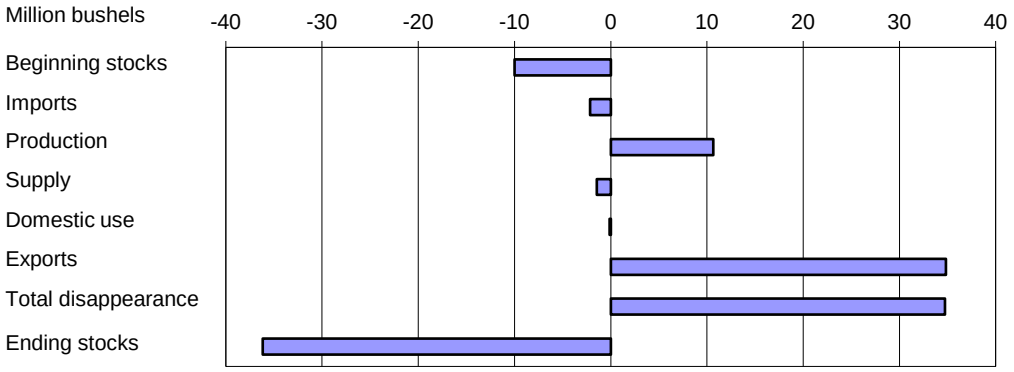
Table 8--Wheat: U.S. exports and imports for last 6 months (1,000 bushels), 6/14/2018

Item		Nov 2017	Dec 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018
Exports	All wheat grain	51,641	79,137	65,821	51,423	78,069	71,212
	All wheat flour[1]	866	1,073	964	1,094	1,157	1,088
	All wheat products[2]	435	566	473	523	456	372
	Total all wheat	52,942	80,776	67,258	53,040	79,682	72,673
Imports	All wheat grain	9,640	9,389	9,775	9,137	10,243	11,567
	All wheat flour[1]	1,499	1,253	1,446	1,301	1,547	1,454
	All wheat products[2]	1,777	1,720	1,680	1,657	1,676	1,828
	Total all wheat	12,915	12,362	12,901	12,095	13,466	14,848

Totals may not add due to rounding.
[1] Expressed in grain-equivalent bushels. Includes meal, groats, and durum.
[2] Expressed 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.

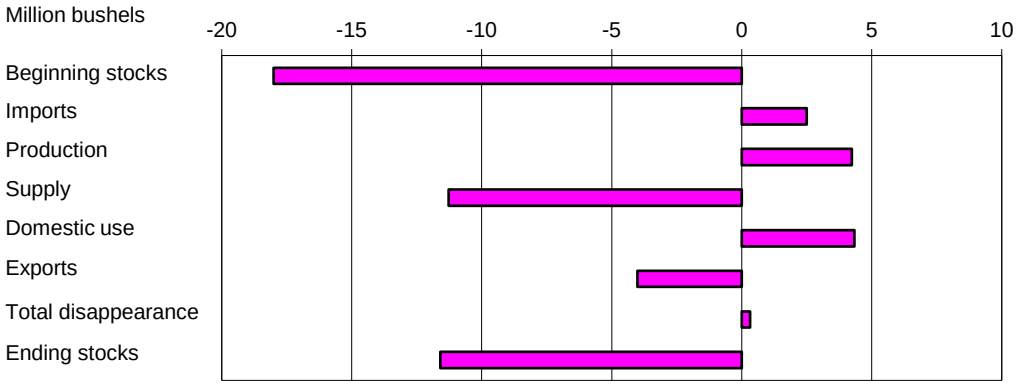
Date run: 6/13/2018

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



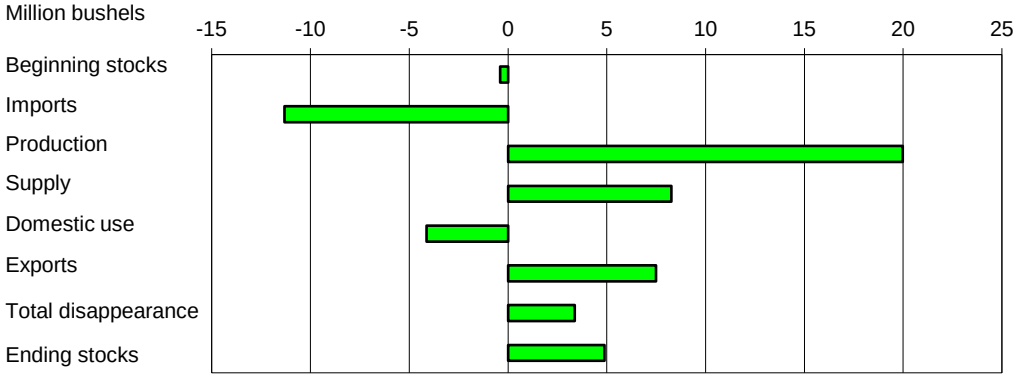
Source: USDA, World Agricultural Outlook Board, *World Agricultural Supply and Demand Estimates.*

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.*

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Data

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Related Websites

Wheat Outlook https://www.ers.usda.gov/publications/pub-details/?pubid=87376
WASDE http://usda.mannlib.cornell.edu/MannUsda/viewDocumentInfo.do?documented=1194
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