EUROPE: Conditions improved for summer crops over much of the continent, though excessive heat and localized drought continued to adversely impact crops in southern Europe.

FSU-WESTERN: Showers in Russia favored vegetative summer crops, while the benefits of welcomed showers in drought-afflicted north-central Ukraine were offset by building heat.

FSU-EASTERN: Conditions remained mostly favorable for vegetative spring grains in the north and flowering cotton in southern portions of the region.

MIDDLE EAST: Excessive late-week heat adversely impacted
vegetative to reproductive summer crops in Turkey.

**SOUTH ASIA:** Monsoon showers spread into northern India and encompassed most of the country.

**EAST ASIA:** Flooding rainfall in southern China was contrasted by unfavorably dry conditions in parts of the northeast.

**SOUTHEAST ASIA:** Rainfall maintained good moisture conditions for rice in the region.

**AUSTRALIA:** Much-needed rain fell across the west and northeast, but unfavorably dry weather persisted in the southeast.

**ARGENTINA:** Beneficial rain overspread the southern winter grain belt.

**BRAZIL:** Dry weather supported seasonal fieldwork, including corn harvesting and wheat planting.

**MEXICO:** Showers provided a much-needed boost in moisture across the southern plateau corn belt.

**CANADIAN PRAIRIES:** Dryness intensified in some southern farming
areas, but lingering wetness remained a problem farther north.

**SOUTHEASTERN CANADA:** Rain continued, but soybean planting was nearly complete in Ontario and Quebec.

**EUROPE:** Widespread rain stabilized or boosted summer crop prospects over much of the continent, although excessive heat and localized drought adversely impacted southern Europe. Following recent hot weather, cooler conditions in Spain (1-3°C below normal) as well as France, England, Germany, and northern Poland (1-3°C above normal, compared to up to 8°C above normal last week) eased or eliminated stress on vegetative to reproductive small grains and summer crops. Furthermore, widespread rain (10-70 mm, locally more) maintained or improved soil moisture as crops such as corn, soybeans, and sunflowers approached or entered the reproductive stages of development. Despite the cooler weather, irrigation requirements remained high for flowering cotton in southern Spain (Andalucía) due to an early end to the winter wet season. Farther east, excessive heat (35-41°C) and dryness in the lower Danube River Valley increased stress on vegetative to reproductive corn and sunflowers, though cooler, showery conditions had returned as of July 3.
FSU-WESTERN: Showers maintained good to excellent summer crop prospects in Russia and eased drought in north-central Ukraine. In Russia, 60-day rainfall through July 1 has averaged 100 to 200 percent of normal, ensuring adequate to abundant moisture reserves as spring grains and summer crops approached or entered the reproductive stages of development. During the past week, showers and thunderstorms continued in Russia, albeit more variable, with totals in key southern corn and sunflower areas ranging from a trace to 42 mm. Widespread moderate to heavy rainfall (10-90 mm) was reported from Belarus into northern Russia, sustaining abundant moisture supplies for crop development. In Ukraine, much-needed rain (10-24 mm) in central portions of the country eased drought, though 60-day precipitation totals remained below 50 percent of normal in many key growing areas. Elsewhere in Ukraine, moderate to heavy showers (10-40 mm) improved prospects for soybeans and corn in the west as well as vegetative sunflowers in east-central growing areas. Dry weather lingered over south-central Ukraine, increasing concerns over developing drought in areas just inland from the Black Sea Coast. Despite the much-needed rain in Ukraine, building heat (33-36°C) increased evapotranspiration rates and largely offset the benefits of the past week’s rain.
FSU-EASTERN: Favorable early-season conditions continued for vegetative to reproductive small grains in the north and cotton in the south. In the spring wheat belt of northern Kazakhstan and central Russia, dry, cool weather (up to 2°C below normal) was beneficial for heading to flowering spring barley (Volga and Urals Districts) as well as jointing spring wheat (northern Kazakhstan and environs); as of July 1, these same locales have reported 100 to 300 percent of normal precipitation over the past 60 days. In Russia’s Siberia District, well-placed showers and thunderstorms (10-60 mm, locally more) eased or eliminated short-term dryness and improved prospects for jointing to heading spring grains. Meanwhile, seasonably dry weather and near-normal temperatures (within 1°C of normal) promoted the development of flowering cotton (which is heavily irrigated) in eastern Uzbekistan and Tajikistan.
MIDDLE EAST: After an excellent start to the summer growing campaign, blistering heat reduced crop prospects in Turkey. Above-normal rainfall over the past 60 days (100-200 percent of normal) boosted moisture reserves for Turkey’s filling winter grains and vegetative summer crops, many of which are irrigated during the climatologically hot, dry summer season. However, conditions for summer crops rapidly deteriorated during the past week, as excessive, untimely record-setting heat arrived across the entire region. In the Middle East, daytime highs approached 50°C in the typically-hotter areas centered on Iraq, with readings above 40°C noted in Turkey’s summer crop areas. In western Turkey, several stations reported weekly maximum temperatures of 45°C, well above the heat-damage threshold for flowering cotton (40°C). In southeastern Turkey, reproductive corn (tasseling stage of development, as estimated by cumulative growing degree data) was subjected to readings as high as 44°C, which would severely impact crop yield potential. Even sunflowers – grown primarily in northwestern Turkey – have been exposed to four consecutive days of 40-degree readings as of July 2 (peak of 41°C), hastening development and stressing the crop as it approaches the onset of bloom.
SOUTH ASIA: Monsoon showers pushed into northern India and were covering most of the country (as reported by the Indian Meteorological Department). Most major crop areas received 50 to over 100 mm of rain, encouraging sowing of rice in the east and cotton and oilseeds in the west (pockets of dry weather occurred in Maharashtra and the traditionally drier southeast). In addition, the recent rainfall improved seasonal (starting June 1) rainfall totals in areas where the arrival of monsoon showers had been delayed by over a week. However, many rice areas in the east continued to experience seasonal rainfall deficits, and more rain is needed to bring the totals up to the long-term average. In other parts of the region, seasonable showers (25-100 mm) continued in summer (yala) rice areas of southwestern Sri Lanka, while showers were more seasonable (25-100 mm or more) in Bangladesh following periodic flooding rainfall over the last several weeks. In Pakistan, 10 to 25 mm of rain in Punjab and 25 to 50 mm in southern Sindh provided supplemental moisture to irrigated cotton and rice.
EAST ASIA: Heavy showers continued across southern China with several areas reporting over 200 mm and, more locally, over 500 mm. The excessively wet weather caused flooding and submerged rice, raising concerns about damage to unharvested early-crop rice and recently sown late-crop rice. Most of the rainfall in China was confined to areas south of the Yangtze River. Little, if any, rainfall was recorded on the North China Plain where corn and other summer crop planting was underway following the wheat harvest. Soil moisture and irrigation remained adequate for summer crop establishment but hot weather (temperatures over 35°C) increased moisture loss. Meanwhile in the northeast, periods of rain brought 10 to locally over 50 mm to corn and soybeans in Heilongjiang and Jilin. However, unfavorably dry weather prevailed in western portions of Heilongjiang and Jilin, as well as Liaoning and neighboring areas of Inner Mongolia. These areas continued to be beleaguered by seasonal (starting May 1) rainfall deficits, with recent temperatures occasionally approaching 40°C further decreasing soil moisture. Elsewhere in the region, showers (10-25 mm or more) in South Korea provided limited relief from an extended period of seasonal dryness, while North Korea remained dry. Much of the Korean Peninsula has been experiencing well-below-normal rainfall for the season (starting May 1), forcing rice growers to rely exclusively on irrigation. In Japan, heavy showers (25-100 mm, locally over 200 mm) overspread most of the country, with lesser amounts (less than 30
mm) in key rice areas of northern Honshu and Hokkaido.

**SOUTHEAST ASIA:** Monsoon showers continued across Indochina, with rice areas throughout Thailand, Laos, Cambodia, and southern Vietnam receiving well over 25 mm and, in some areas, up to 150 mm. Seasonal rainfall (beginning May 1) in these countries remained above normal and well above normal in Thailand. Similarly in the Philippines, 25 to over 100 mm of rain maintained favorable moisture conditions for rice and corn and kept seasonal totals above to well above normal. Farther south, showers (25-50 mm locally more) maintained favorable soil moisture for oil palm in Malaysia and Sumatra and further improved 90-day moisture conditions in western Malaysia, where oil palm prospects continued to be better than the drought-impacted crop last year.
**AUSTRALIA:** Widespread showers (5-25 mm) overspread Western Australia, providing a much-needed boost in topsoil moisture for vegetative winter grains and oilseeds. The rain helped stabilize crop conditions, but rainfall totals since May 1 still remain well below normal. As a result, significant, follow-up rains will be needed to further improve crop prospects in this state. On the opposite end of the wheat belt, widespread showers (5-25 mm, locally more) in southern Queensland and northern New South Wales benefited wheat and other winter crops. Similar to Western Australia, additional rain is needed to aid winter crop establishment. Elsewhere in the wheat belt, unfavorably dry weather persisted in southeastern Australia, further hampering wheat, barley, and canola development. Since the end of May, major crop producing areas in South Australia, northern Victoria, and southern New South Wales have received very little rain, increasing concerns that drought may develop and stunt crop growth. Rain is needed to reverse the recent drying trend and to improve crop prospects in southeastern Australia. Temperatures in the wheat belt were generally seasonable, averaging within 1°C of normal in most locations.
**ARGENTINA:** Rain overspread the southern winter grain belt, increasing moisture for germination and establishment of wheat and barley. Large sections of central Argentina (La Pampa, Buenos Aires, and neighboring locations in Cordoba and southern Santa Fe) recorded at least 10 mm, with the highest amounts (25-50 mm or more) in high-yielding winter grain areas in southern La Pampa and Buenos Aires. While slowing fieldwork, the rainfall helped to improve long-term moisture reserves following an extended period of dryness. Locally heavy rain (10-25 mm, locally higher) fell from northeastern Santa Fe eastward to northern Uruguay, otherwise dry weather dominated Argentina’s more northerly farming areas. The northern dryness was welcomed for harvesting of cotton and other seasonal fieldwork. Weekly temperatures averaged 3 to 5°C above normal throughout Argentina’s major agricultural production areas, with daytime highs reaching the 30s (degrees C) in the far north and the middle 20s as far south as Buenos Aires. Nighttime lows fell below freezing in a few of the country’s traditionally cooler locations. According to the government of Argentina, corn was 66 percent harvested as of June 29, 15 points ahead of last year. Soybean harvesting was virtually complete (98 percent). In addition, wheat was reportedly 57 percent planted, slightly behind last year’s pace (59 percent); however, planting was 35 percent complete in Buenos Aires — Argentina’s largest producer — nearly 10 points ahead of last year.
BRAZIL: Dry weather favored seasonal fieldwork in nearly all major agricultural districts. Virtually no rain fell from central Rio Grande do Sul northward through the Center-West Region (Mato Grosso, Goias, and Mato Grosso do Sul) and northeastern interior (Tocantins, western Bahia, and farming areas in Piaui and Maranhao); rainfall (10-25 mm) in southern Rio Grande do Sul was south of the main winter wheat areas. According to the government of Rio Grande do Sul, wheat was 71 percent planted (versus the average of 74 percent) as of June 29, owing to recent weeks of favorable dryness. Reports emanating from Parana depict wheat planting at 92 percent complete, and second-crop corn harvesting at 4 percent, by June 26. By comparison, corn was 29 percent harvested in Mato Grosso – Brazil’s leading producer of second-crop corn – as of June 30, slightly ahead of last year’s pace (26 percent). Seasonable dryness also favored harvesting of sugarcane and coffee in key southeastern production areas (Sao Paulo and Minas Gerais), which had experienced earlier periods of untimely wetness. Meanwhile, seasonal showers (10-50 mm, locally higher) boosted moisture for coffee, cocoa, and sugarcane along Brazil’s northeastern coast. Weekly average temperatures were seasonable to above normal throughout Brazil, fostering rapid drydown of maturing row crops. Temperatures stayed well above freezing in traditionally cooler southern production areas, although nighttime lows fell below
10°C in coffee areas of southern Minas Gerais.

**MEXICO:** Following several weeks of sporadic rainfall, widespread, locally heavy showers overspread the southern plateau, providing a needed boost in moisture for summer corn. Rainfall totaled more than 50 mm across a large section of the region stretching from Jalisco to Puebla, with most locations recording at least 25 mm. The rainfall also helped to bring temperatures back down to seasonable levels, with daytime highs generally in the upper 20s and lower 30s (degrees C) across the region. Similar rainfall totals and temperatures were recorded along the southern Pacific Coast (Michoacan to Oaxaca) and other key southeastern farming areas. The increase in rainfall was particularly welcome in sugarcane areas in Veracruz, both the southern (in and around northern Oaxaca) and northern (neighboring San Luis Potosi and Tamaulipas) zones. Rainfall also intensified in northeastern Mexico (Tamaulipas and Nuevo Leon), providing a needed boost in moisture for reservoirs as well as for livestock, which has suffered recently from extreme summer warmth (daytime highs approaching 40°C). Similarly, showers returned to northwestern watersheds, which have been exposed to higher evaporative losses from the summer heat (highs reaching into the lower 40s).
CANADIAN PRAIRIES: Unfavorably dry weather continued in southern agricultural districts, even as some more northerly and easterly production areas struggled with lingering wetness. The driest area continued to be southwestern Saskatchewan, which recorded little to no rain this week and has trended below normal since early May; this is reinforced by reports out of Canada as well as the Canadian Drought Monitor, where southern Saskatchewan and Manitoba have been abnormally dry, and a small area in Saskatchewan has been placed in moderate drought. Dry weather was also recorded this week in western sections of Alberta. In contrast to the southern dryness, light to moderate rain (10-40 mm, locally higher) continued across northern agricultural districts, hindering the final stages of spring planting, cutting hay, and treatments for pests and diseases. Reports emanating from Canada indicated the continuation of waterlogging in some fields which, at this late point in the growing season, would likely go unplanted with a major spring crop. Weekly temperatures averaged near to below normal across the region, with nighttime lows approaching 0°C in some of the colder parts of Alberta and Saskatchewan, however there were no reports of frost or freeze conditions in crop growing areas.
SOUTHEASTERN CANADA: Rainy weather has persisted, as soybean replanting continued due to the recent abundant precipitation. Rainfall totaled 10 to 40 mm across Ontario and Quebec, with higher amounts along the Ontario-Quebec border (50 to 100 mm). Rainfall provided well-above-normal amounts of moisture for agriculture; however, major growing areas saw near-normal rainfall and avoided the heaviest precipitation. Above-normal rainfall since early May has continued to disrupt crop planting (now replanting) and treatments for diseases and pests. Slightly below-normal temperatures (1-3 degrees C) were coupled with wet weather, as daytime highs reached the upper 20s (degrees C) for much of the week, and isolated areas in southern Ontario exceeded 30°C. Overnight lows continued to drop into the low teens, with only a few places recording single digit nighttime low temperatures.