IRAQ: Dry Weather Threatens the Winter Grains Crop in Northern Iraq

Northern Iraq is the main winter grain producing area for Iraq (Fig. 1). This region is heavily dependent on precipitation for its winter grains production. Planting begins in October and continues until late December for both wheat and barley. According to media reports dry conditions have raised concerns that the winter grains have experienced unfavorable conditions for establishment, and in some instances, dryness prevented planting.

The vegetation anomaly (Normalized Difference Vegetation Index – NDVI) map for northern Iraq provides supporting evidence for the media reports; vegetation conditions are below normal (Fig. 2). Percent normal precipitation from October until the end of December shows rainfall was well below average providing additional evidence that the concerns for the winter grains crop situation is valid (Fig. 3). Time series NDVI analysis for northern Iraq indicates an under-performing crop at this time (Fig. 4). A slight increase in the vegetation condition occurred recently because of rainfall that has brought some relief to the dry conditions since mid-January (Fig. 5). The actively growing winter grains crops responded to these January rains because temperatures have been mild and not cold enough to put these crops into dormancy (Fig. 6).

Satellite imagery has confirmed late planting field activities that may help boost the planted area (Fig. 7). The imagery from the WorldView-2 satellite, with a slightly earlier observation in the morning of Feb. 8, 2018 shows the overturned soil from plowing (dark on the image). The imagery from WorldView-3 satellite marks the progress of the fieldwork later that morning. Fields being worked and possibly planted in early February may provide some added production if
precipitation proves favorable for the remainder of the season. Harvest begins in late May and there is still time for the
crop situation to improve. USDA will release its first estimates of Iraq wheat and barley May 10, 2018.

Other related links at FAS for monitoring worldwide crop conditions and droughts are available at:

Crop Explorer (https://ipad.fas.usda.gov/cropexplorer/Default.aspx)

USDA and NASA’s GLAM (Global Agriculture Monitoring) System for MODIS-NDVI Time Series Graphs
(https://glam1.gsfc.nasa.gov/)

FAS World Agricultural Production (WAP) circular (https://www.fas.usda.gov/data/world-agricultural-production)
Figure 2. Winter Grains Vegetation Index Anomaly Map Over Northern Iraq
Figure 3. Percent Normal Cumulative Precipitation Illustrating Below Normal Precipitation Over Northern Iraq during Planting

OCT 1 to DEC 31, 2017

planting
harvest


Barley
Wheat

Jan  Feb  Mar  Apr  May  Jun  Jul  Aug  Sep  Oct  Nov  Dec
Figure 4. Vegetation Index for Winter Grains Over the Northern Iraq

Aqua EOS PM MODIS NDVI 8-day composite
NASA Goddard Space Flight Center / GIMMS and USDA Office of Global Analysis
Figure 5. Cumulative Precipitation Over Northern Iraq

- Normal
- 2015
- 2016
- 2017
Figure 6. Average Temperature Over Northern Iraq

![Average Temperature Over Northern Iraq](image)

*Normal* vs. *2017*
Figure 7. Observed Worked Fields Northeast of Mosul, Iraq
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Current area and production estimates for grains and other agricultural commodities are available on
IPAD's Agricultural Production page:
Crop Explorer https://ipad.fas.usda.gov/cropexplorer/or

Production, Supply and Distribution Database (PSD Online):

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