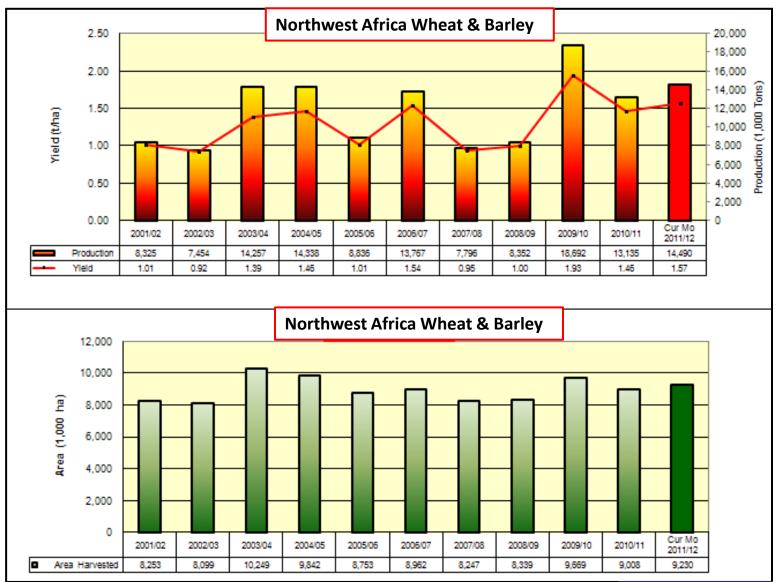
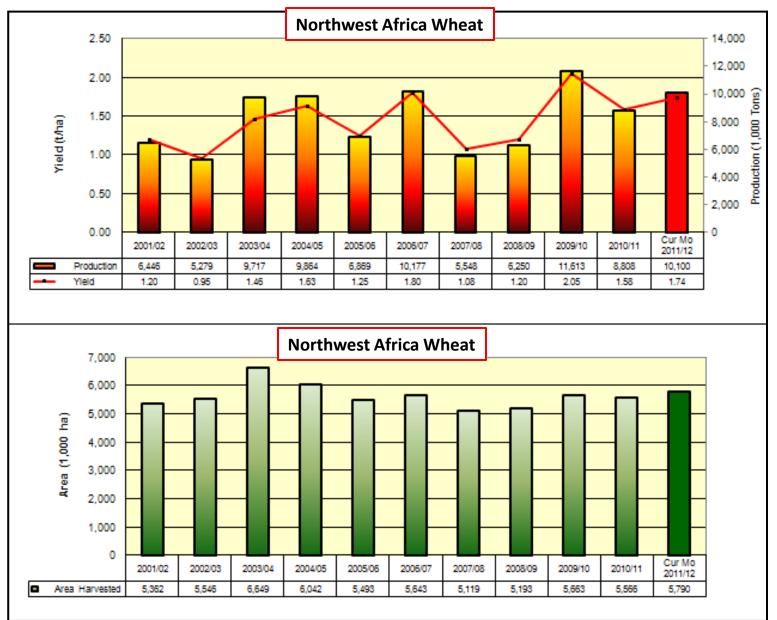


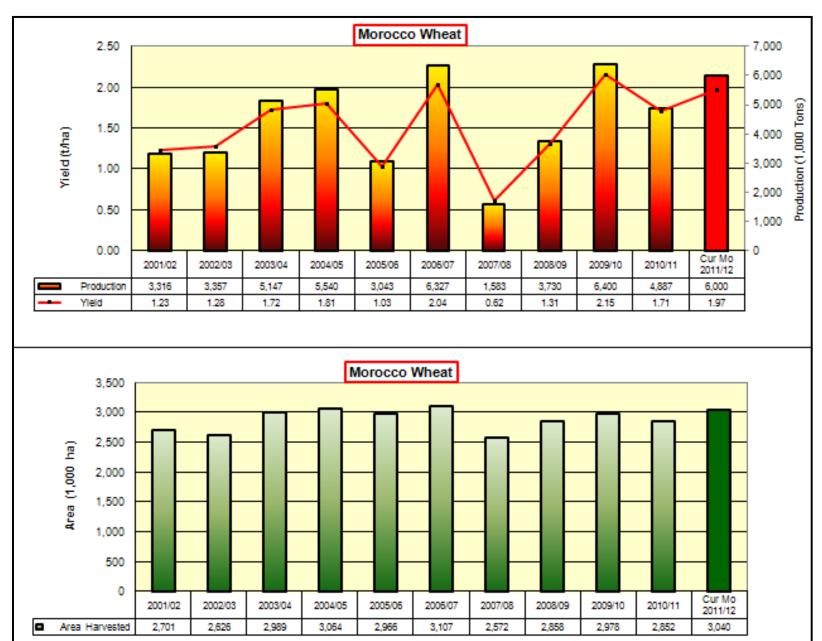
Northwest Africa (Morocco, Algeria, & Tunisia) Combined Wheat & Barley Area, Yield, & Production



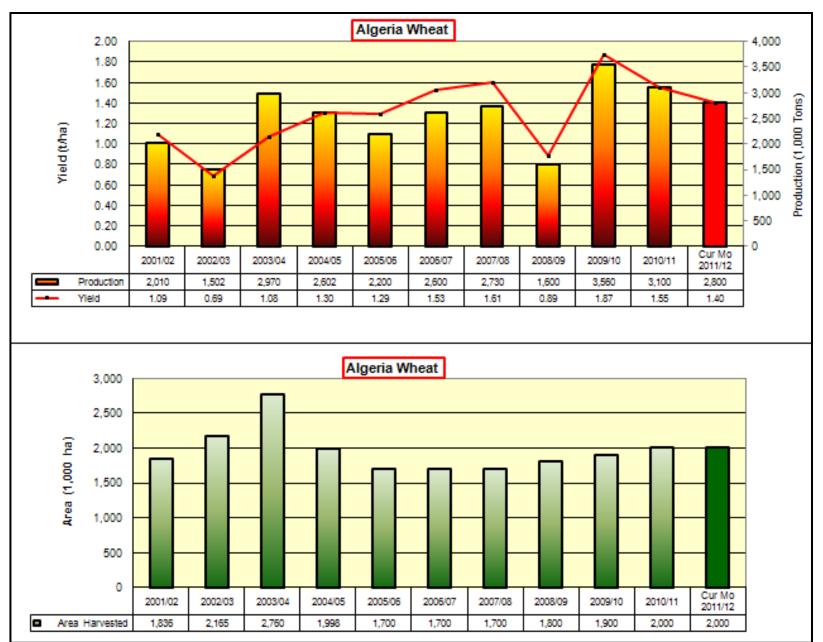
Northwest Africa (Morocco, Algeria, & Tunisia) Wheat Area, Yield, & Production



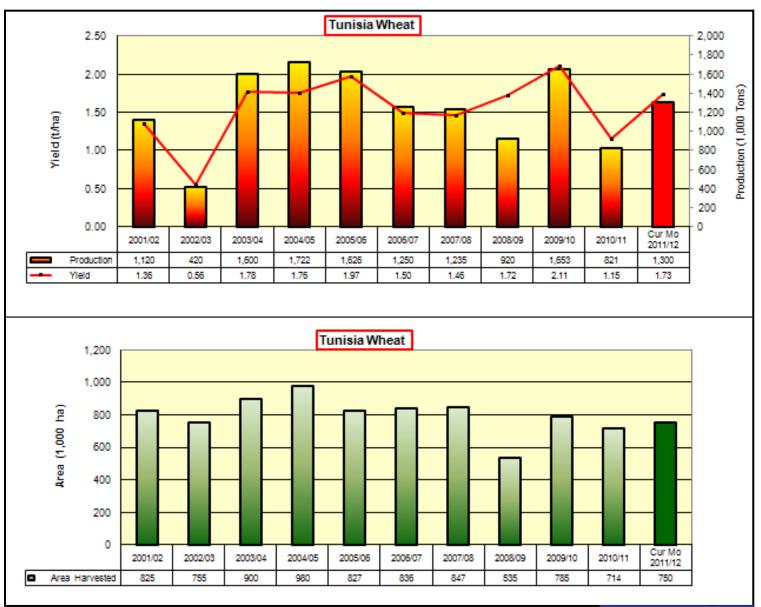
Morocco Wheat Area, Yield, & Production



Algeria Wheat Area, Yield, & Production



Tunisia Wheat Area, Yield, & Production

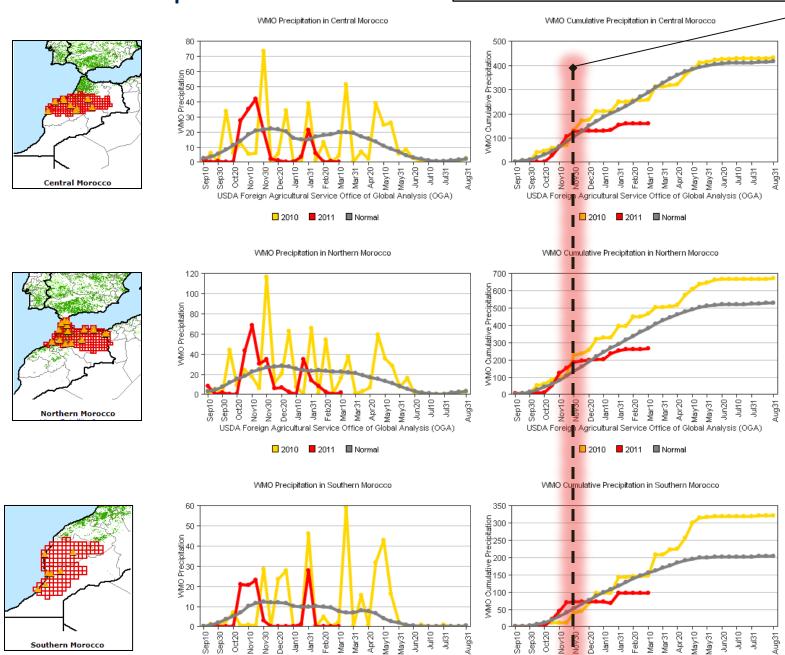


Cumulative Precipitation in Morocco

Southern Morocco

Rainfall rapidly diminished in all areas of Morocco just before December

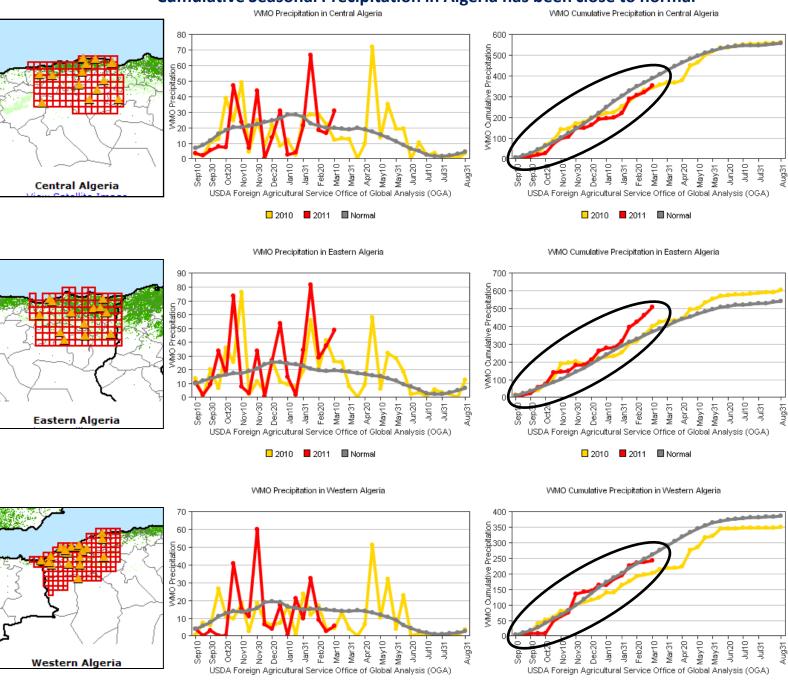
USDA Foreign Agricultural Service Office of Global Analysis (OGA)



USDA Foreign Agricultural Service Office of Global Analysis (OGA)



Cumulative Seasonal Precipitation in Algeria has been close to normal WMO Precipitation in Central Algeria

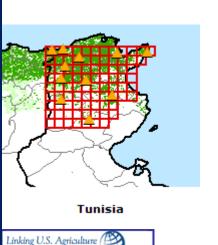


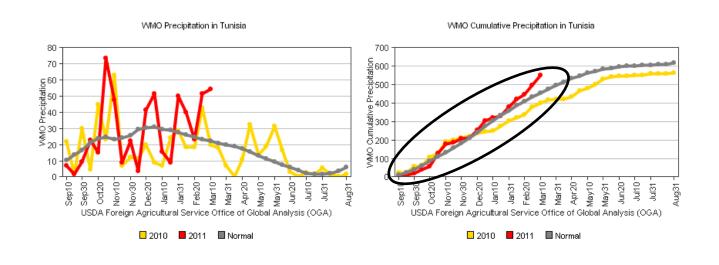
□ 2010 ■ 2011 ■ Normal



□ 2010 ■ 2011 ■ Normal

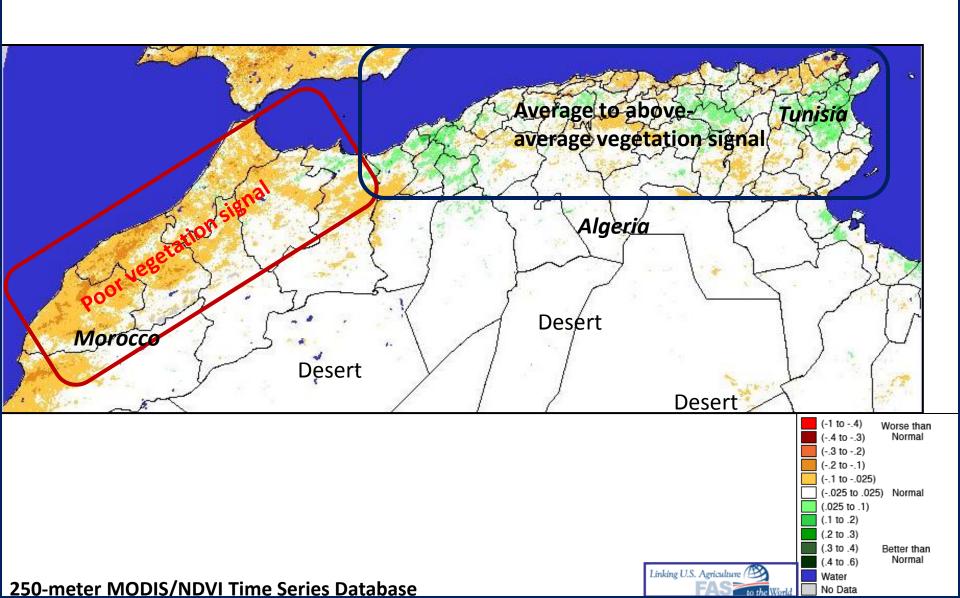
Precipitation in Tunisia has been favorable with normal or above-normal amounts all season.





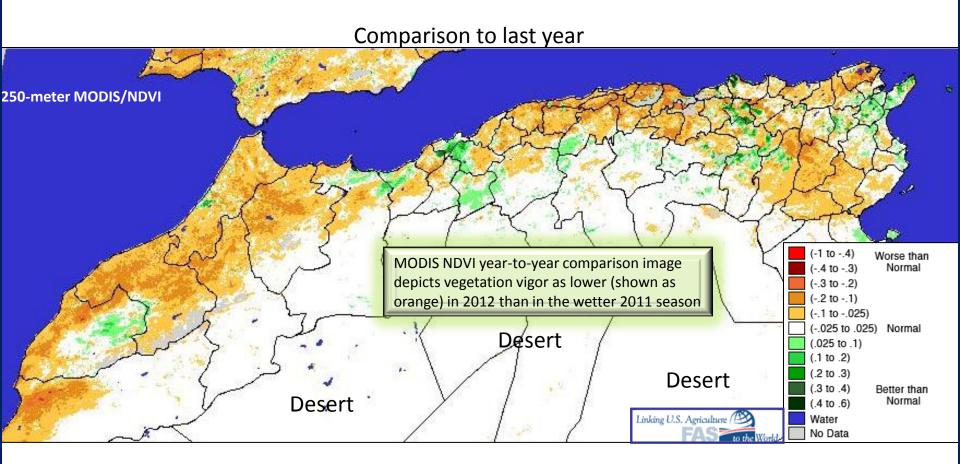
Conditions in North Africa as depicted by MODIS Satellite Data

Composite of Mar-05 to Mar-20 2012 vs. Ten-Year Average

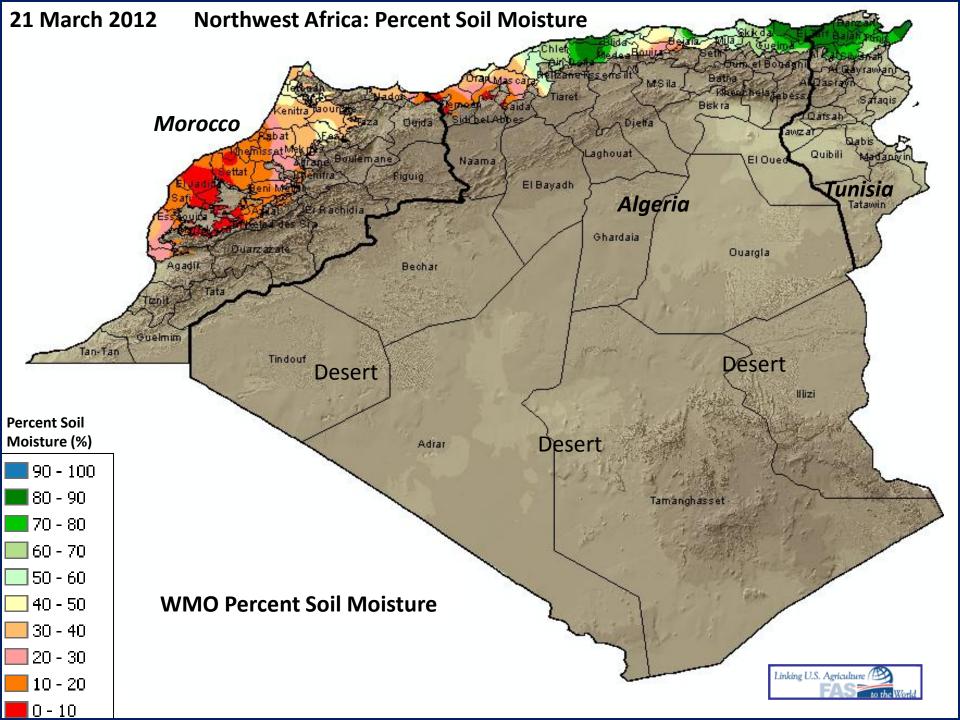


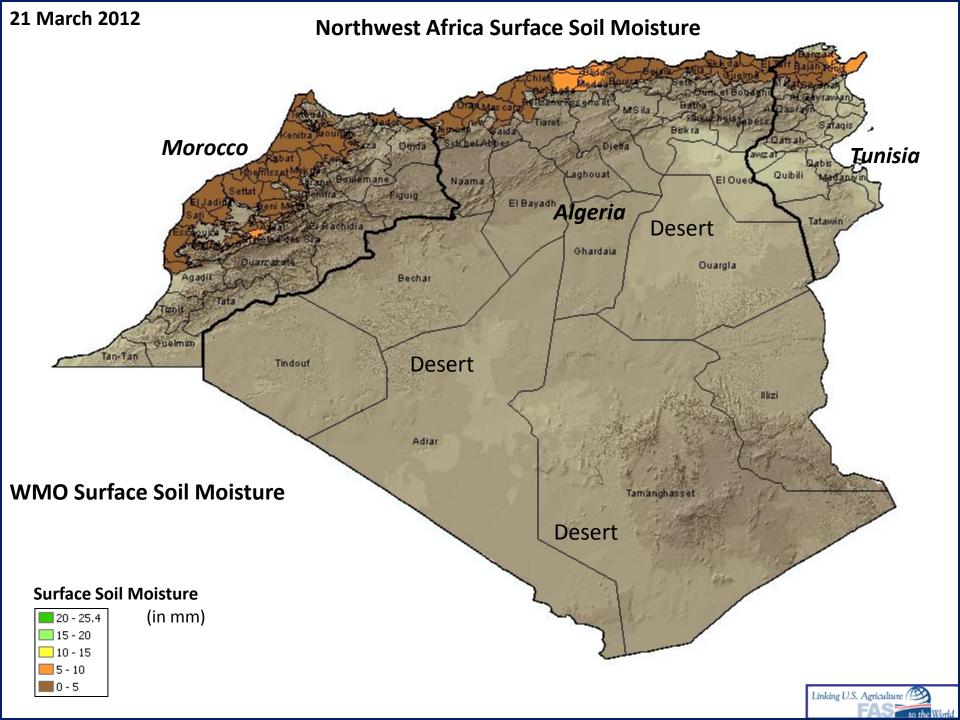
Conditions in North Africa as depicted by MODIS Satellite Data

Composite of March 5 -20, 2012 vs. March 2011

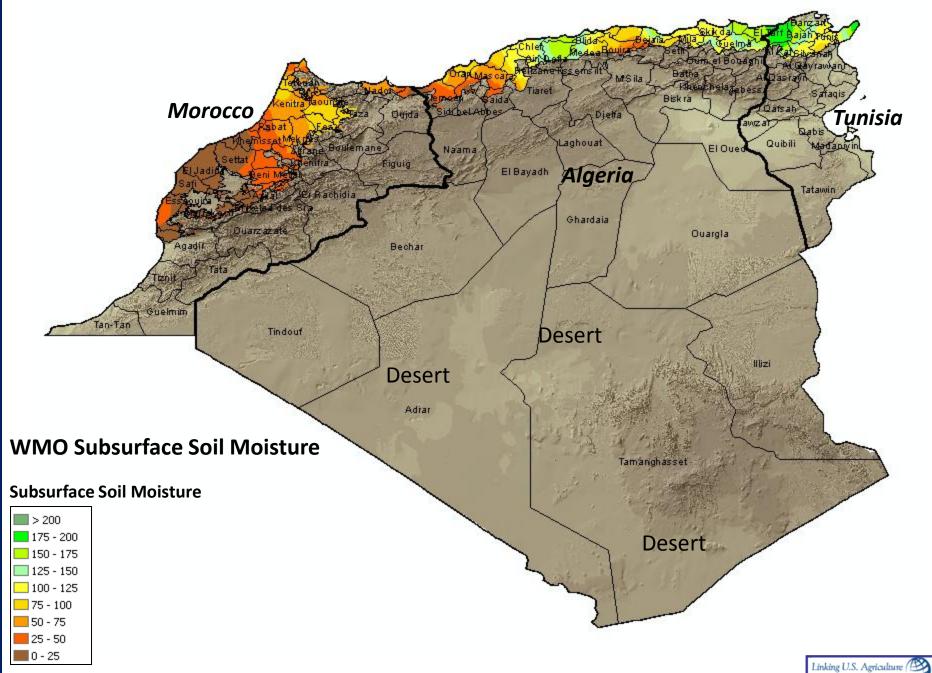


When compared to last year's crop this year's vegetation in Northwest Africa appears much worse

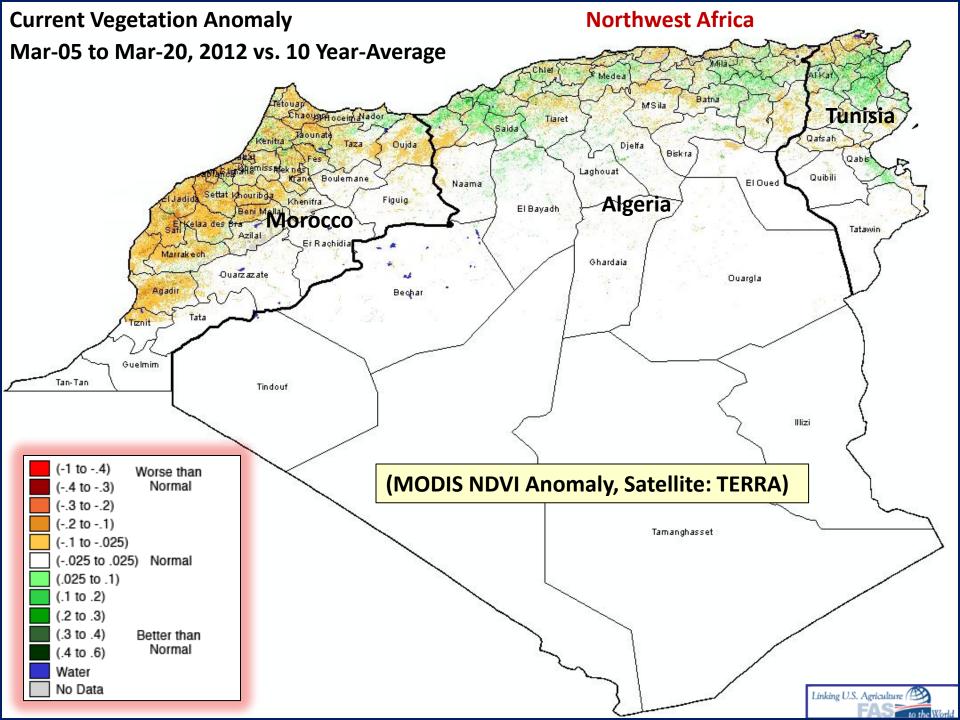


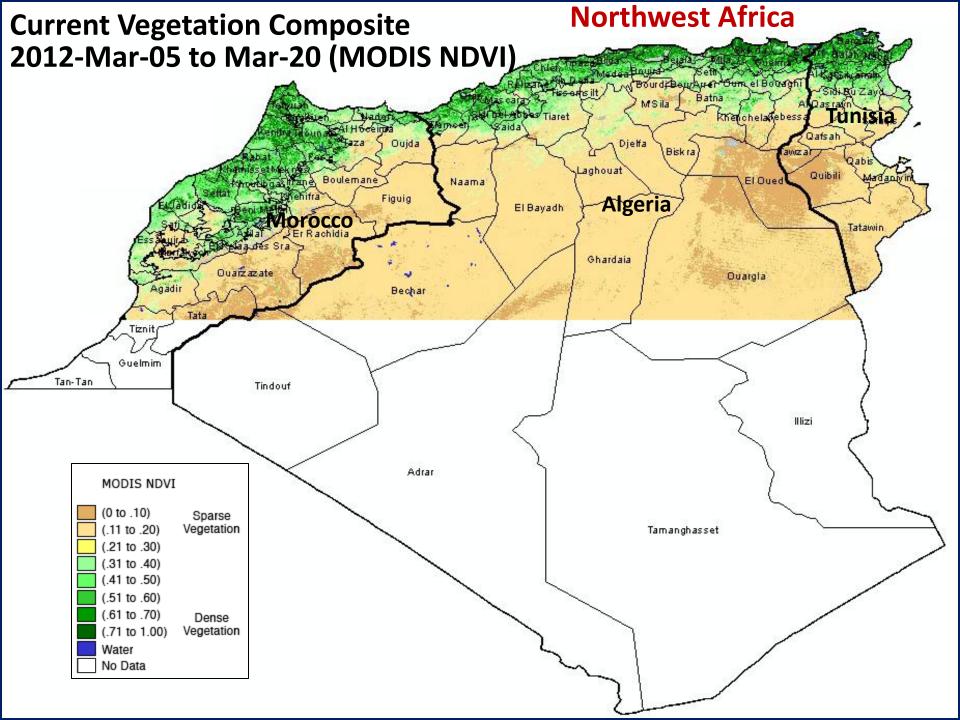


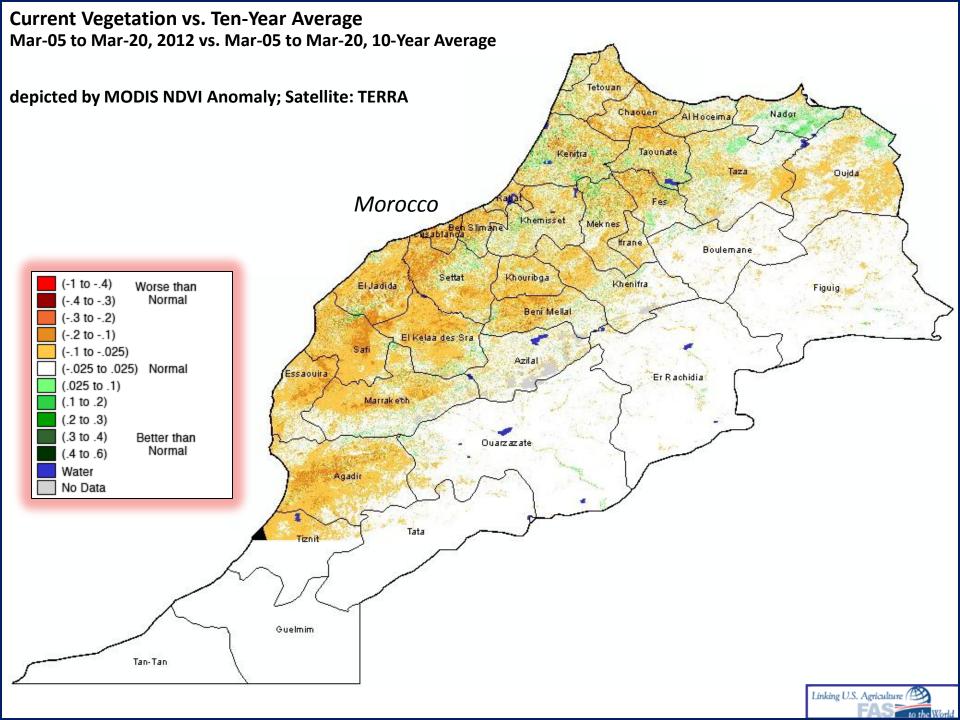
Subsurface Soil Moisture in Northwest Africa

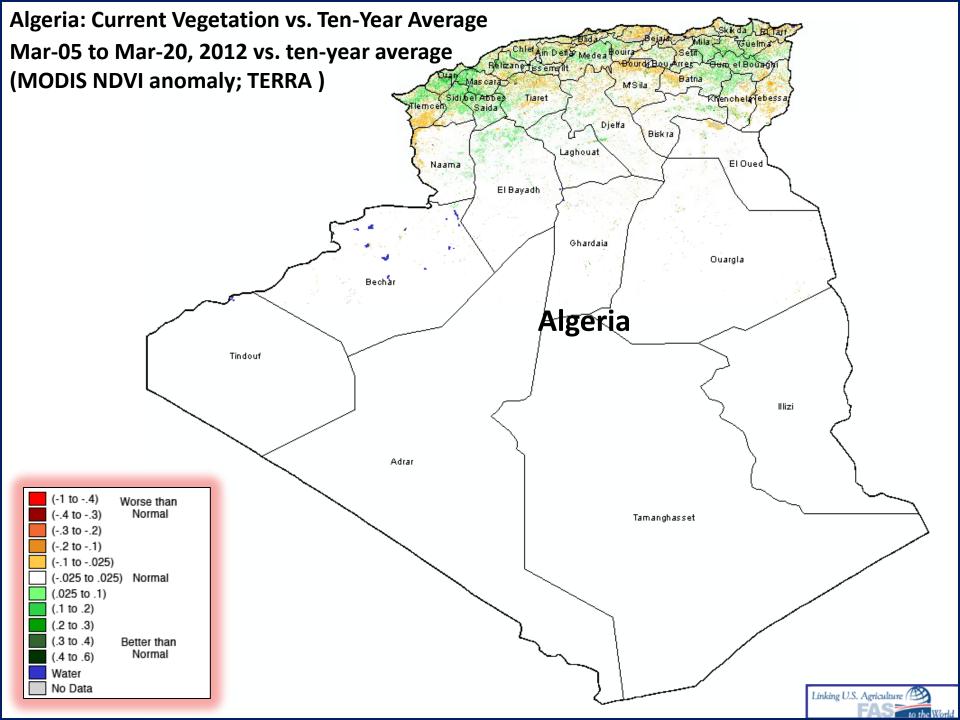


to the World



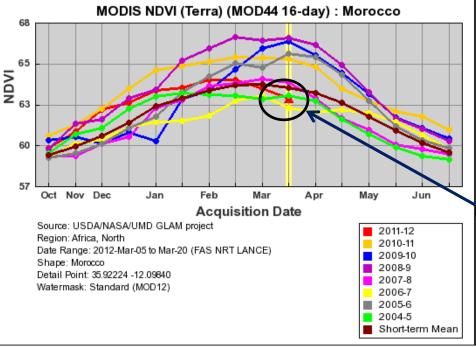


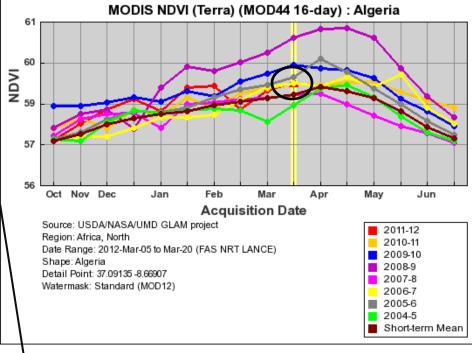


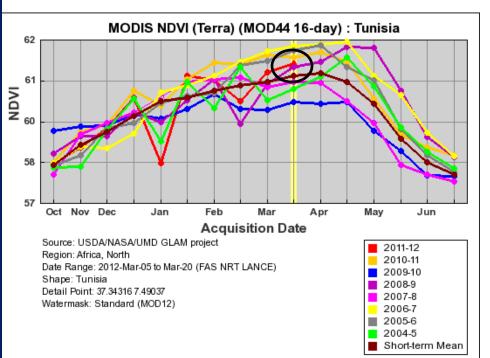


Tunisia: Current Vegetation vs. Ten-Year Average Nabul Jundubah Bajah Zaghwah Mar-05 to Mar-20, 2012 (MODIS NDVI **Tunisia** Alkaf Silyanah **Anomaly TERRA) vs. Ten-Year Average** Susah Al Qayrawan AlMunastig Al Mahdiyah Al Qas rayn Sidi Bu Zayd Safaqis Qafsah Tawzar Qabis Madaniyin. (-1 to -.4) Worse than (-.4 to -.3) Normal (-.3 to -.2) (-.2 to -.1) Tatawin (-.1 to -.025) (-.025 to .025) Normal (.025 to .1) (.1 to .2) (.2 to .3) (.3 to .4) Better than Normal (.4 to .6) Water No Data









Northwest Africa NDVI Graphs:

Vegetation Index in Morocco continues to fall after peaking in early February, about a month earlier than normal.

Algeria and Tunisia NDVI graphs appear to be still rising. This year appears about average in Algeria and a little higher than average in Tunisia

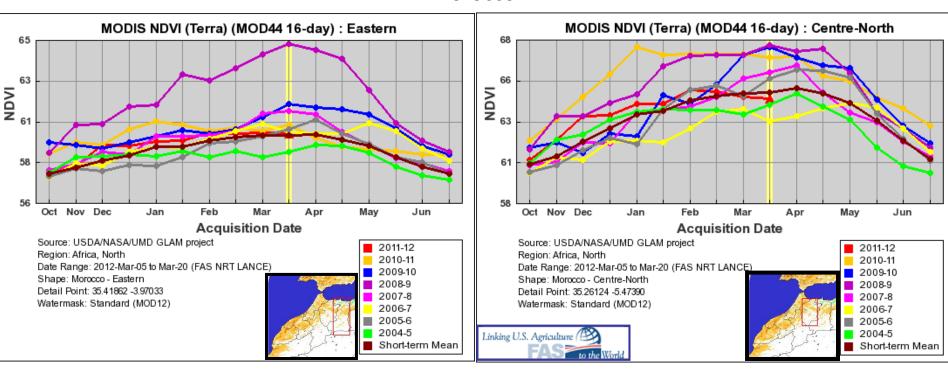
NDVI graphs are good indicators of vegetation health over a period of time. Generally, the higher NDVI graphs correspond to healthier, denser vegetation, which can then be inferred to the crops.



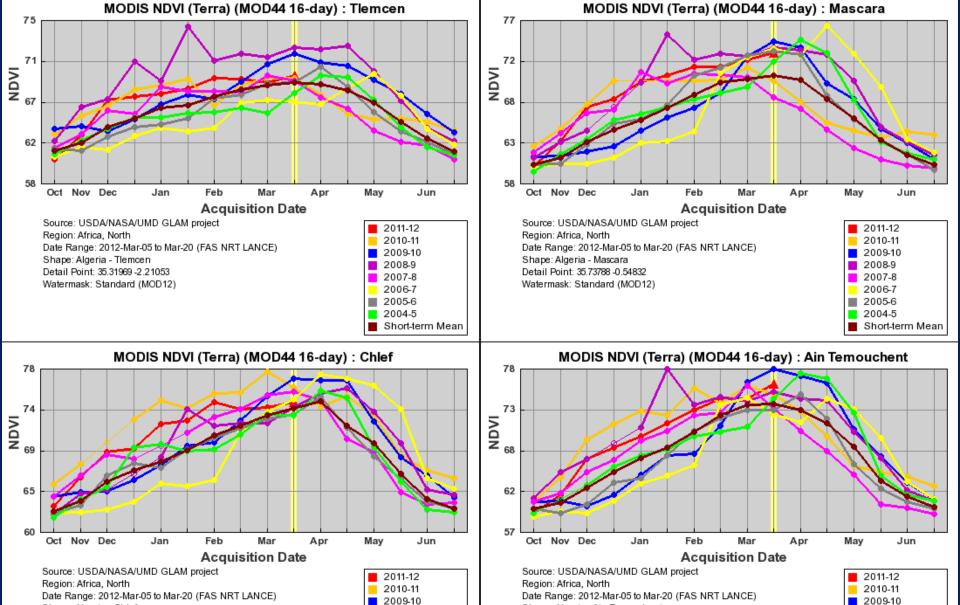
2011/12 NDVI Depicts Below-Average Crop Conditions Morocco: MODIS NDVI (Terra) (MOD44 16-day): Centre MODIS NDVI (Terra) (MOD44 16-day): Tensift 80 75 70 NDV 66 N 70 61 Mar Oct Nov Dec Feb Mar Dec Jan Feb Apr May Jun Jan Apr May Jun Nov **Acquisition Date Acquisition Date** Source: USDA/NASA/UMD GLAM project Source: USDA/NASA/UMD GLAM project 2011-12 2011-12 Region: Africa, North Region: Africa, North 2010-11 2010-11 Date Range: 2012-Mar-05 to Mar-20 (FAS NRT LANCE) Date Range: 2012-Mar-05 to Mar-20 (FAS NRT LANCE) 2009-10 2009-10 Shape: Morocco - Centre Shape: Morocco - Tensift 2008-9 2008-9 Detail Point: 33.85380 -9.05600 Detail Point: 32.77911 -9.84716 2007-8 2007-8 Watermask: Standard (MOD12) Watermask: Standard (MOD12) 2006-7 2006-7 2005-6 2005-6 2004-5 2004-5 Short-term Mean Short-term Mean MODIS NDVI (Terra) (MOD44 16-day): North-West MODIS NDVI (Terra) (MOD44 16-day): Centre-South 82 63 77 61 M 73 NDVI 58 56 Oct Nov Dec Jan Feb Mar Apr May Jun Oct Nov Dec Jan Feb Mar Apr May Jun **Acquisition Date Acquisition Date** Source: USDA/NASA/UMD GLAM project Source: USDA/NASA/UMD GLAM project 2011-12 2011-12 Region: Africa, North Region: Africa, North 2010-11 2010-11 Date Range: 2012-Mar-05 to Mar-20 (FAS NRT LANCE) Date Range: 2012-Mar-05 to Mar-20 (FAS NRT LANCE) 2009-10 2009-10 Shape: Morocco - Centre-South Shape: Morocco - North-West 2008-9 2008-9 Detail Point: 35.91999 -7.08916 Detail Point: 34.28323 -6.45266 2007-8 2007-8 Watermask: Standard (MOD12) Watermask: Standard (MOD12) 2006-7 2006-7 2005-6 2005-6 2004-5 2004-5 Linking U.S. Agriculture Short-term Mean Short-term Mean to the World

NDVI depicts poor-to-average crop conditions in eastern Morocco

Morocco



Western Algeria MODIS NDVI Time Series: 2011/12 NDVI Depicts Average Crop Conditions



2008-9

2007-8

2006-7 2005-6

2004-5

Short-term Mean

Shape: Algeria - Ain Temouchent

Detail Point: 35.67942 -1.36361

Watermask: Standard (MOD12)

2008-9

2006-7

2004-5

Short-term Mean

2007-8

2005-6

Shape: Algeria - Chlef

Detail Point: 36.55176 0.68712

Watermask: Standard (MOD12)

2011/12 NDVI Depicts Average Crop Conditions Central Algeria: MODIS NDVI (Terra) (MOD44 16-day): Tipaza MODIS NDVI (Terra) (MOD44 16-day): Bouira 83 IAON 74 ND 70 65 60 Oct Nov Dec Jan Feb Mar Apr May Jun Oct Nov Dec Jan Feb Mar Apr May Jun **Acquisition Date Acquisition Date** Source: USDA/NASA/UMD GLAM project Source: USDA/NASA/UMD GLAM project 2011-12 2011-12 Region: Africa, North Region: Africa, North 2010-11 2010-11 Date Range: 2012-Mar-05 to Mar-20 (FAS NRT LANCE) Date Range: 2012-Mar-05 to Mar-20 (FAS NRT LANCE) 2009-10 2009-10 Shape: Algeria - Tipaza Shape: Algeria - Bouira 2008-9 2008-9 Detail Point: 36.80357 1.69363 Detail Point: 36.69790 3.26107 2007-8 2007-8 Watermask: Standard (MOD12) Watermask: Standard (MOD12) 2006-7 2006-7 2005-6 2005-6 2004-5 2004-5 Short-term Mean Short-term Mean MODIS NDVI (Terra) (MOD44 16-day): Tizi Ouzou MODIS NDVI (Terra) (MOD44 16-day): Bejaia 89 80 ND 76 N 79 71 73 Oct Nov Dec Feb Mar Jan Apr May Jun Oct Nov Dec Jan Feb Mar Apr May Jun **Acquisition Date Acquisition Date** Source: USDA/NASA/UMD GLAM project Source: USDA/NASA/UMD GLAM project 2011-12 2011-12 Region: Africa, North Region: Africa, North 2010-11 2010-11 Date Range: 2012-Mar-05 to Mar-20 (FAS NRT LANCE) Date Range: 2012-Mar-05 to Mar-20 (FAS NRT LANCE) 2009-10 2009-10 Shape: Algeria - Bejaia Shape: Algeria - Tizi Ouzou 2008-9 2008-9 Detail Point: 36.89575 4.35074 Detail Point: 36.90699 3.72704 2007-8 2007-8 Watermask: Standard (MOD12)

Linking U.S. Agriculture

to the World

2006-7

2005-6

2004-5

Short-term Mean

2006-7

2005-6

2004-5

Short-term Mean

Watermask: Standard (MOD12)

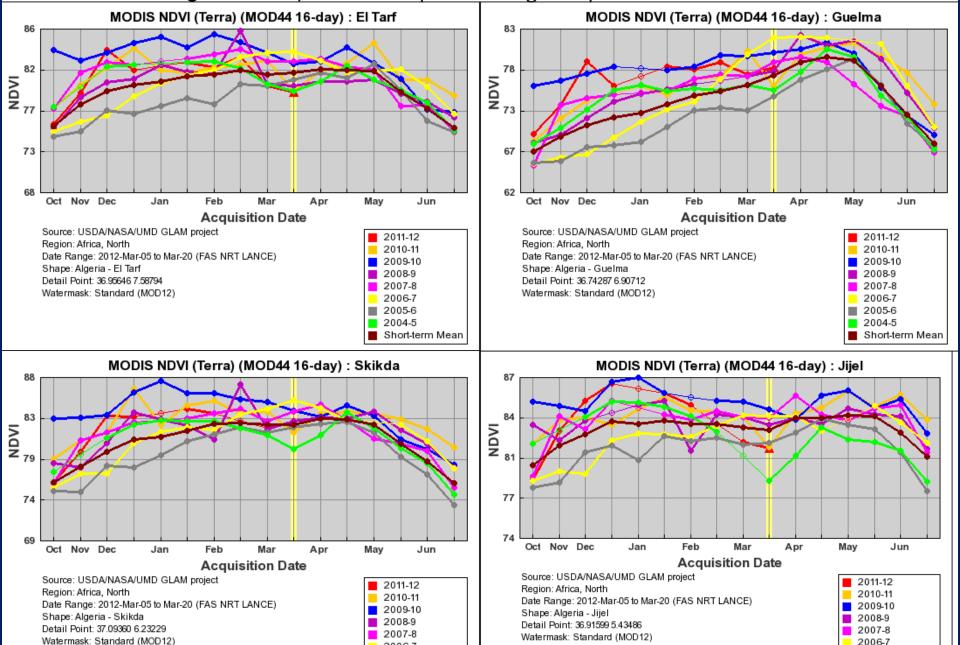
Eastern Algeria: 2011/12 NDVI Depicts Average Crop Conditions

2006-7

2005-6

2004-5

Short-term Mean



Linking U.S. Agriculture

to the World

2006-7

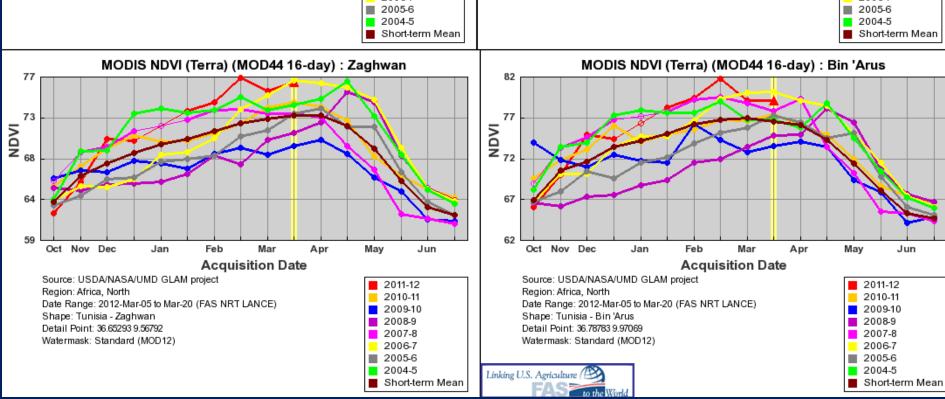
2005-6

2004-5

Short-term Mean

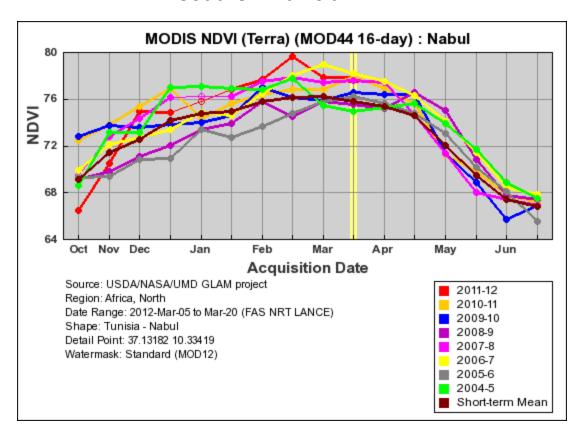
Northern Tunisia: 2011/12 NDVI Depicts Good Crop Conditions MODIS NDVI (Terra) (MOD44 16-day): Jundubah MODIS NDVI (Terra) (MOD44 16-day): Bajah 86 78 81 N 73 N 76 Oct Nov Dec Feb Mar Oct Nov Dec Jan Feb Mar Jun Jan Apr May Jun Apr May **Acquisition Date Acquisition Date** Source: USDA/NASA/UMD GLAM project Source: USDA/NASA/UMD GLAM project 2011-12 2011-12 Region: Africa, North Region: Africa, North 2010-11 2010-11 Date Range: 2012-Mar-05 to Mar-20 (FAS NRT LANCE) Date Range: 2012-Mar-05 to Mar-20 (FAS NRT LANCE) 2009-10 2009-10 Shape: Tunisia - Jundubah Shape: Tunisia - Bajah 2008-9 2008-9 Detail Point: 37.16555 8.89664 Detail Point: 37.02166 8.17992 2007-8 2007-8 Watermask: Standard (MOD12) Watermask: Standard (MOD12) 2006-7 2006-7 2005-6 2005-6 2004-5 2004-5 Short-term Mean Short-term Mean MODIS NDVI (Terra) (MOD44 16-day): Aryanah MODIS NDVI (Terra) (MOD44 16-day): Banzart 87 82 77 | ND 71 NDN 75 Oct Nov Dec Oct Nov Dec Mar Jan Feb Mar Apr May Jun Jan Feb Apr May Jun **Acquisition Date** Acquisition Date Source: USDA/NASA/UMD GLAM project Source: USDA/NASA/UMD GLAM project 2011-12 2011-12 Region: Africa, North Region: Africa, North 2010-11 2010-11 Date Range: 2012-Mar-05 to Mar-20 (FAS NRT LANCE) Date Range: 2012-Mar-05 to Mar-20 (FAS NRT LANCE) 2009-10 2009-10 Shape: Tunisia - Banzart Shape: Tunisia - Aryanah 2008-9 2008-9 Detail Point: 37.12957 9.55334 Detail Point: 37.54101 8.89484 2007-8 2007-8 Watermask: Standard (MOD12) Watermask: Standard (MOD12) 2006-7 2006-7 2005-6 2005-6 2004-5 2004-5 Short-term Mean Short-term Mean

Southern Tunisia: 2011/12 NDVI Depicts Good Crop Conditions MODIS NDVI (Terra) (MOD44 16-day): Al Kaf MODIS NDVI (Terra) (MOD44 16-day): Silyanah 77 76 72 72 NDV 68 NDN 67 Nov Dec Jan Feb Mar Apr May Jun Oct Nov Dec Jan Feb Mar Apr May Jun Oct **Acquisition Date Acquisition Date** Source: USDA/NASA/UMD GLAM project Source: USDA/NASA/UMD GLAM project 2011-12 2011-12 Region: Africa, North Region: Africa, North 2010-11 2010-11 Date Range: 2012-Mar-05 to Mar-20 (FAS NRT LANCE) Date Range: 2012-Mar-05 to Mar-20 (FAS NRT LANCE) 2009-10 2009-10 Shape: Tunisia - Al Kaf Shape: Tunisia - Silyanah 2008-9 2008-9 Detail Point: 36.43935 8.26084 Detail Point: 36.45733 8.91782 2007-8 2007-8 Watermask: Standard (MOD12) Watermask: Standard (MOD12) 2006-7 2006-7 2005-6 2005-6 2004-5 2004-5 Short-term Mean Short-term Mean MODIS NDVI (Terra) (MOD44 16-day) : Zaghwan MODIS NDVI (Terra) (MOD44 16-day): Bin 'Arus 82 77 NDVI 72 67 62 Oct Nov Dec Oct Nov Dec Jan Feb Mar Apr May Jun Jan Feb Mar Apr May Jun **Acquisition Date Acquisition Date**

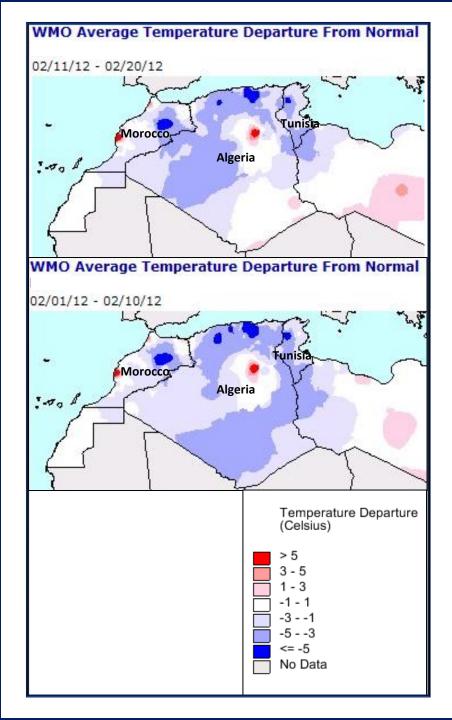


2011/12 NDVI Depicts Good Crop Conditions

Southern Tunisia





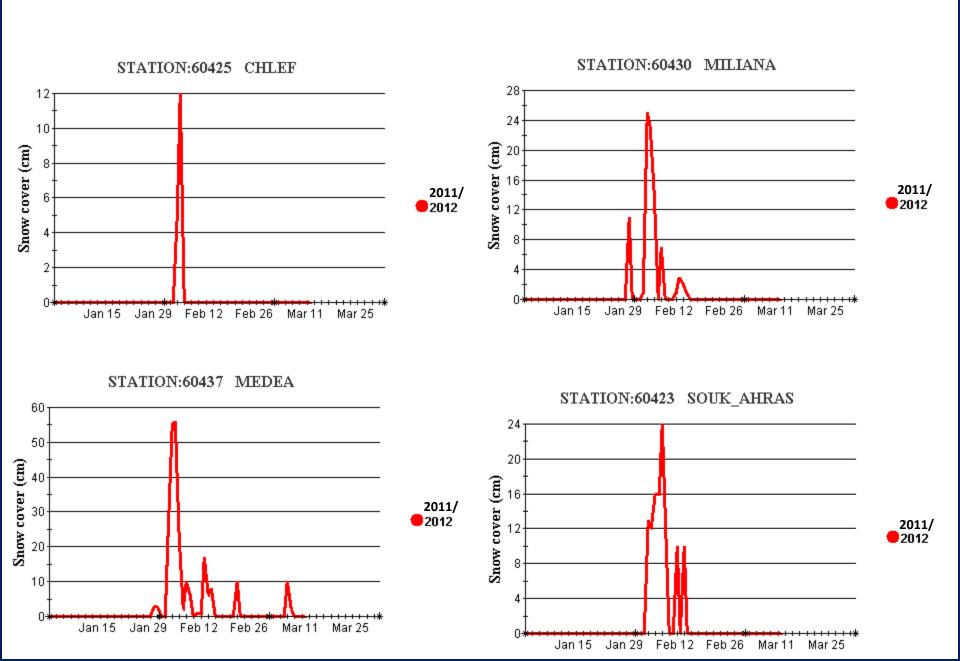


An Unusually Cold February in Northwest Africa

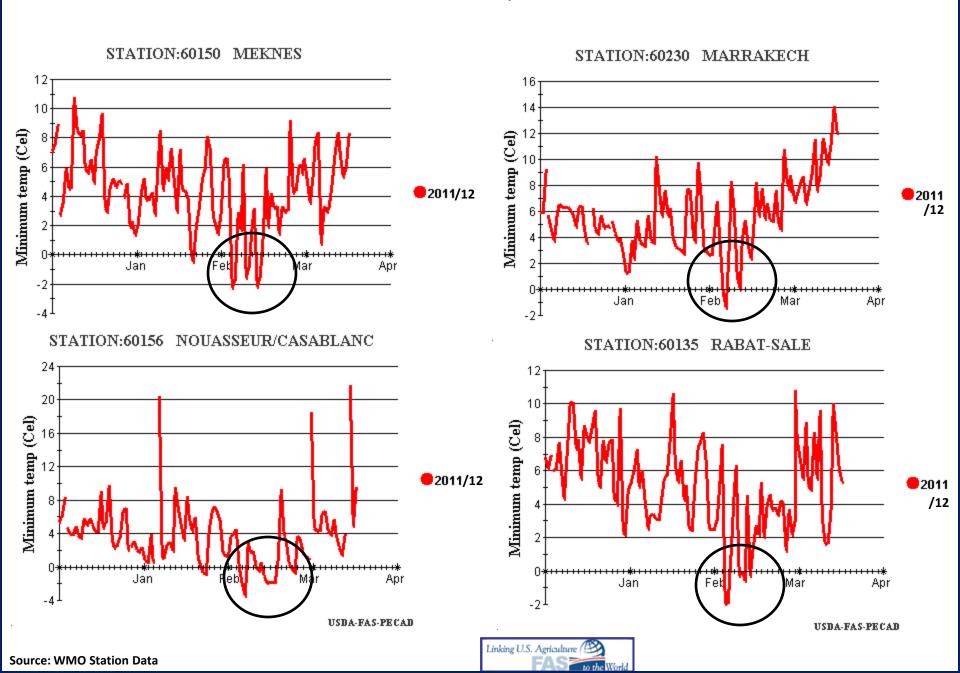
Cold winter temperatures have delayed crop progress and may have reduced yield potential. It is feared that head size, kernel size, and number of kernels may be reduced due to the unusual cold.



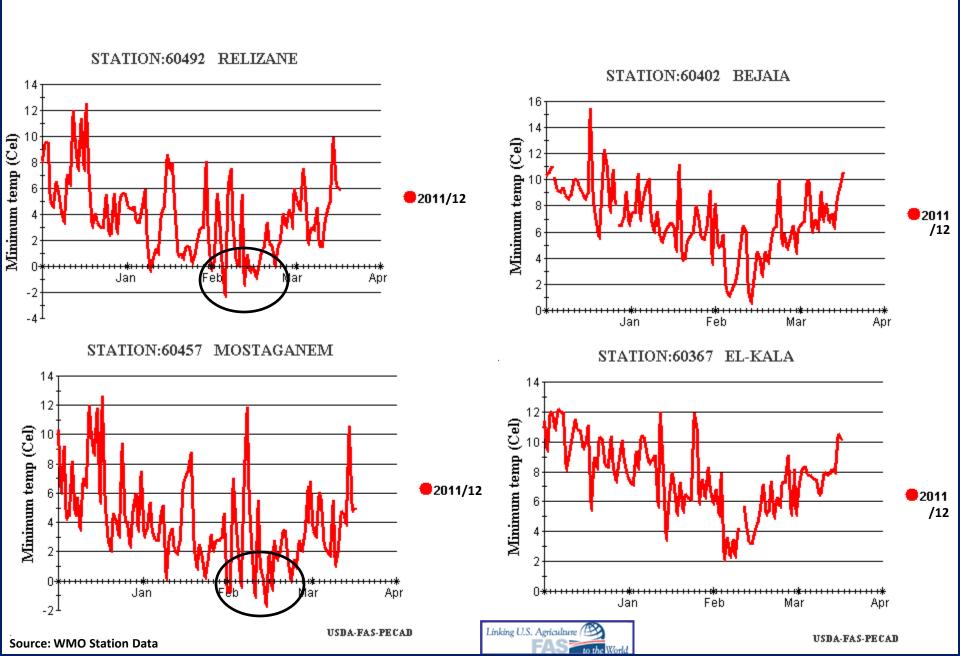
Rare Snow in Algeria



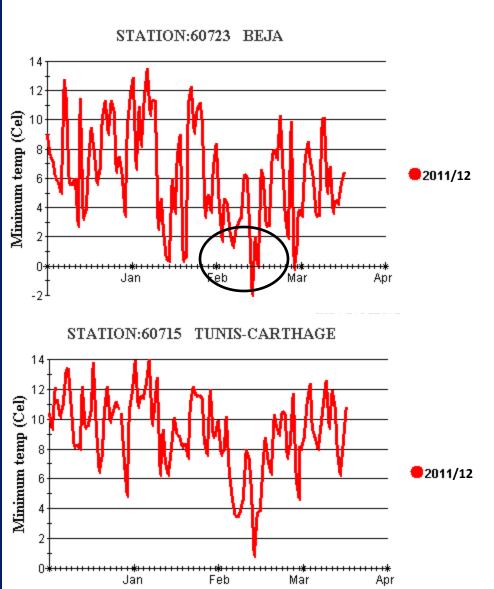
Morocco Minimum Temperatures

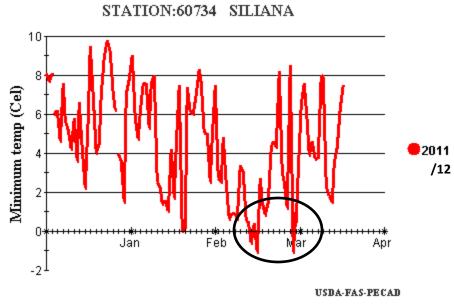


Algeria Minimum Temperatures



Tunisia Minimum Temperatures





Linking U.S. Agriculture (ES)
to the World

USDA-FAS-PECAD