Sharing Global Agriculture and Farming Information using Metadata Services

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Foreign Agricultural Service (FAS)

• Improve foreign market access

• Build new markets

• Improve the competitive position of U.S. agriculture

• Provide food aid and technical assistance to foreign countries
Every Month
PECAD publishes:
World Agricultural Production
and contributes to:
World Agricultural Supply and Demand Estimates

More Info at:
www.fas.usda.gov/pecad
## FAS-PECAD

### Production Estimates and Crop Assessment Division

**Responsible For:**
- Monthly/Weekly Worldwide Crop Production Estimates: (Grains, Oilseeds, Cotton)
- Commodity Analysis & Remote Sensing
- Official USDA Satellite Imagery Archive
- Domestic (FSA) Crop Conditions
- USA County/State Office Support
- Natural Disaster Response
- Global Food Aid Support

**Data Sources:**
- Worldwide Information Gathering & Analysis from Multiple Sources
- FAS Staff in 89 International Posts
- Extensive Satellite Imagery
- Global Weather Information Products
- Crop Yield and Soil Moisture Models
- Electronic News Services
- Country Commodity Reports
Global Weather Information Products
Crop Yield and Soil Moisture Models

Source Data
85,000 Grid Cells processed each day
Attributes Currently Shared:

- Average_Temperature
- Maximum_Temperature
- Maximum_Temperature_Departure
- Minimum_Temperature
- Minimum_Temperature_Departure
- Percent_Normal_Precipitation
- Percent_Soil_Moisture
- Precipitation
- Snow_Cover
- Snow_Depth
- Sub_Surface_Soil_Moisture
- Surface_Soil_Moisture
- Temperature_Departure
www.pecad.fas.usda.gov/cropexplorer/
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<th>Toolbox</th>
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**AFWA Decadal Percent Normal Precipitation**

01/21/05 - 01/31/05

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**USDA-FAS-PECAD**

**AFWA Decadal Percent Normal Precipitation**

01/21/05 - 01/31/05

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**USDA-FAS-PECAD**
Agricultural Region: Marcos Juarez, Cordoba
Argentina’s Most Important Soybean Production Area.
Crop Explorer Maps
Created using ArcIMS Engine

Dekadal Processing – One map represents a 10-day period
Custom Java application calls ArcIMS using predefined Image Service
Over 1000 Map images added to Crop Explorer Web every 10 days
Archived by Growing Season back to 2000
How to search the Geography Network Explorer

1. Specify the location you want to search.
   
   Type a place name such as Alabama or Boston and click Go. A list of places that match what you typed will appear. Click the place you want in this list to choose it.

   Or

   Draw a box on the map with the tool to define the area you want to search. You may need to Zoom In first.

2. Choose any additional search criteria.
ArcIMS Image Services

- USDA_FAS_Average_Temperature
- USDA_FAS_Maximum_Temperature
- USDA_FAS_Maximum_Temperature_Departure
- USDA_FAS_Minimum_Temperature
- USDA_FAS_Minimum_Temperature_Departure
- USDA_FAS_Percent_Normal_Precipitation
- USDA_FAS_Percent_Soil_Moisture
- USDA_FAS_Precipitation
- USDA_FAS_Snow_Cover
- USDA_FAS_Snow_Depth
- USDA_FAS_Sub_Surface_Soil_Moisture
- USDA_FAS_Surface_Soil_Moisture
- USDA_FAS_Temperature_Departure

afwa_active
wmo_active

Server: [http://151.121.3.218:8100](http://151.121.3.218:8100)

ArcIMS 4 (soon to be 9.0.1)

Each Service represents most recent ~10-day period
Add Data From Internet
Select Geography Network
Add to ArcMap
How to search the Metadata Explorer

1. Specify the location you want to search.
   Draw a box on the map with the tool to define the area you want to search.

2. Choose any additional search criteria.
   These choices are all optional.

3. Press "Start Search"
Home

Below is the Home content that is currently available.

Live Data and Maps

Publisher: USDA-FAS-CMP-PECAD  
Content Title: AFWA – PECAD AFWA Grid Cells

Publisher: Production Estimates and Crop Assessment Division (USDA-FAS-CMP-PECAD)  
Content Title: WMO – PECAD WMO Stations
Content Citation:
Title of Content: Precipitation - Cumulative Precipitation for 10 Day Period
Type of Content: Live Data and Maps (ArcGIS Image Service)
Content Publisher: USDA, Foreign Agricultural Service
Publication Place: Washington, DC
Publication Date: 2004

Content Description:
Content Summary: Precipitation data is acquired by USDA-FAS from the Air Force Weather Agency on a daily basis. Data is aggregated on a regular 10-day (dekadal) cycle at a resolution of approximately 40km using the 1/8 mesh-grid reference system. Each grid cell contains a value for the most recent dekadal period. The date attribute indicates the end date of the dekadal period. Historical data archived by growing season can be viewed at USDA’s Crop Explorer website: www.pecad.fas.usda.gov/cropexplorer.
Content Purpose: Global precipitation values are used for crop condition indicators in analysis of commodity production and yield estimates.
Supplemental Information: The Air Force Weather Agency (AFWA) began to develop the Agricultural Meteorology Model (AGRMET) in 1981 (Cochran,
Precipitation - Cumulative Precipitation for 10 Day Period

Legend
- COUNTRY
- PRECIPITATION (2005-01-31)
- > 400 (mm)
- 200 - 400
- 100 - 200
- 50 - 100
- 25 - 50
- 10 - 25
- 5 - 10
- <= 5

No Data
Troubleshooting publishing problems

- Did you enable authentication in Esrimap_prop file?
- Is the pathname to the ACL file correct? A common mistake is to use a backslash (\)...you must use forward slashes (/).
- Did you use the right role?
- How did you name your service in Administrator?
- Did you restart your servlet engine or Web server?
- Are you using Microsoft® Internet Information Server (IIS)? IIS must be configured for authentication....
- Is the Metadata Service taking a long time to publish documents?
- Are you publishing metadata documents greater than one megabyte?
- Look for errors in the metadata log file.

Source: PAGE 29 ESRI Creating and Using Metadata Services
Precipitation - Cumulative Precipitation for 10 Day Period

ArcIMS Image Service

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<th>Description</th>
<th>Spatial</th>
<th>Attributes</th>
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Keywords

- **Theme**: precipitation, cumulative, production estimates, crop assessment, area, yield, gnd, station, weather, agro-meteorological, remote sensing, satellite imagery, commodity, marketing, SSM/I, GOES, METEOSAT, GMS, RTNEPH, LAC, AVHRR

Description
ArcIMS Metadata Server Theme

Keywords:

- farming
- biota
- boundaries
- climatologyMeteorologyAtmosphere
- economy
- elevation
- environment
- geoscientificInformation
- health

- imageryBaseMapsEarthCover
- intelligenceMilitary
- inlandWaters
- location
- oceans
- planningCadastre
- society
- structure
- transportation
- utilitiesCommunication
USDA Crop Explorer: Global Crop Condition and Commodity Production Analysis from the USDA/Production Estimates and Crop Assessment Division (PECAD)

Update this record

Summary

2004-09-16

The Production Estimates and Crop Assessment Division (PECAD) of USDA's Foreign Agricultural Service (FAS) is responsible for global crop condition assessments and estimates of area, yield, and production for grains, oilseeds, and cotton. The primary mission of PECAD is to produce the most objective and accurate assessment of the global agricultural production outlook and the conditions affecting food security in the world. Regional analysts use a Geographic Information System (GIS) to collect market intelligence, and forecast reliable global production numbers for grains, oil seeds and cotton.

The FAS has a global network of attachés that provide on-the-ground reports of observed crop and contextual information. Also, the FAS regional analysts travel extensively in the countries they cover to more fully develop the context and constraints within which their assessments are made. Other contextual information such as official governmental reports, trade and news sources play a significant role in interpreting how these factors will affect price and policies and other economic variables. PECAD's final production...
Lessons Learned