

USE OF LANDSAT BY DISTRICT ADVISORY OFFICERS

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Landsat images covering over half of NSW are routinely acquired 1-4 times per year for use by district advisory officers. Particularly the district agronomists consult these images for:

1. routine monitoring - With seasonal coverage, information is gained on conditions and developments, for example, pasture response and areas of crop;
2. opportunistic analysis and mapping (using suitable images) to get information for a wide range of purposes, for example, farm management practices, floods and land clearing.

The district agronomists at Nyngan and Walgett have been receiving Landsat images regularly for five years, giving them major benefits by increasing their efficiency and knowledge of their districts.

Some of the uses are illustrated on the poster boards and can be summarised under the following categories:

Cropping: Usually a sequence of images through a season are interpreted to give a range of cropping information, for example, location and extent of crop areas, within season and end of season area estimates, areas of early and long fallow crops, crop rotations and paddock histories.

Pastures: Imagery after rainfall shows the location, extent and condition of pasture response. Droughts can also be monitored using imagery.

Natural Vegetation: Particularly in the extensive western districts, Landsat helps officers monitor the status of natural vegetation communities and rangelands. Changes over time can be observed economically as each image covers 3.5 million hectares and provides a permanent record of conditions. Information derived from Landsat includes post-fire regeneration, changes in density of woody weeds, land clearing and retained natural vegetation tracts, i.e. "window pane effect".

Soils: Images from droughts provide detailed maps of broad-soil categories such as red soils, light sandy soils and dark clay soils.

Water Management: Maps of floods, location and areas of irrigated crops, size and location of water storages, irrigation layout patterns.

Currently the Department is developing a Geographic Information System (GIS) to store paddock information derived from landsat, together with a range of other data, e.g. boundaries, roads, soils, etc. This will provide detailed statistics including crop histories over a number of years.