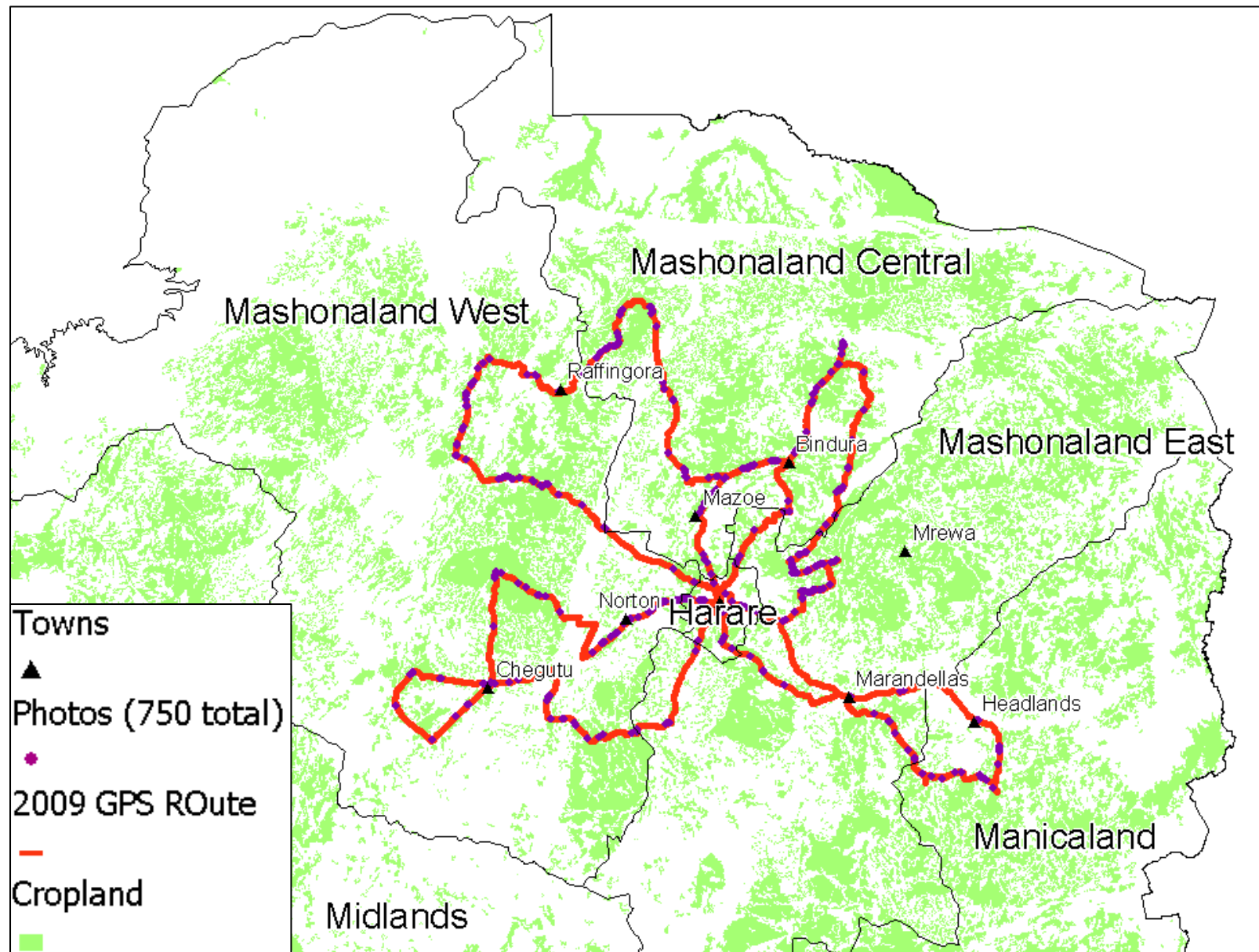
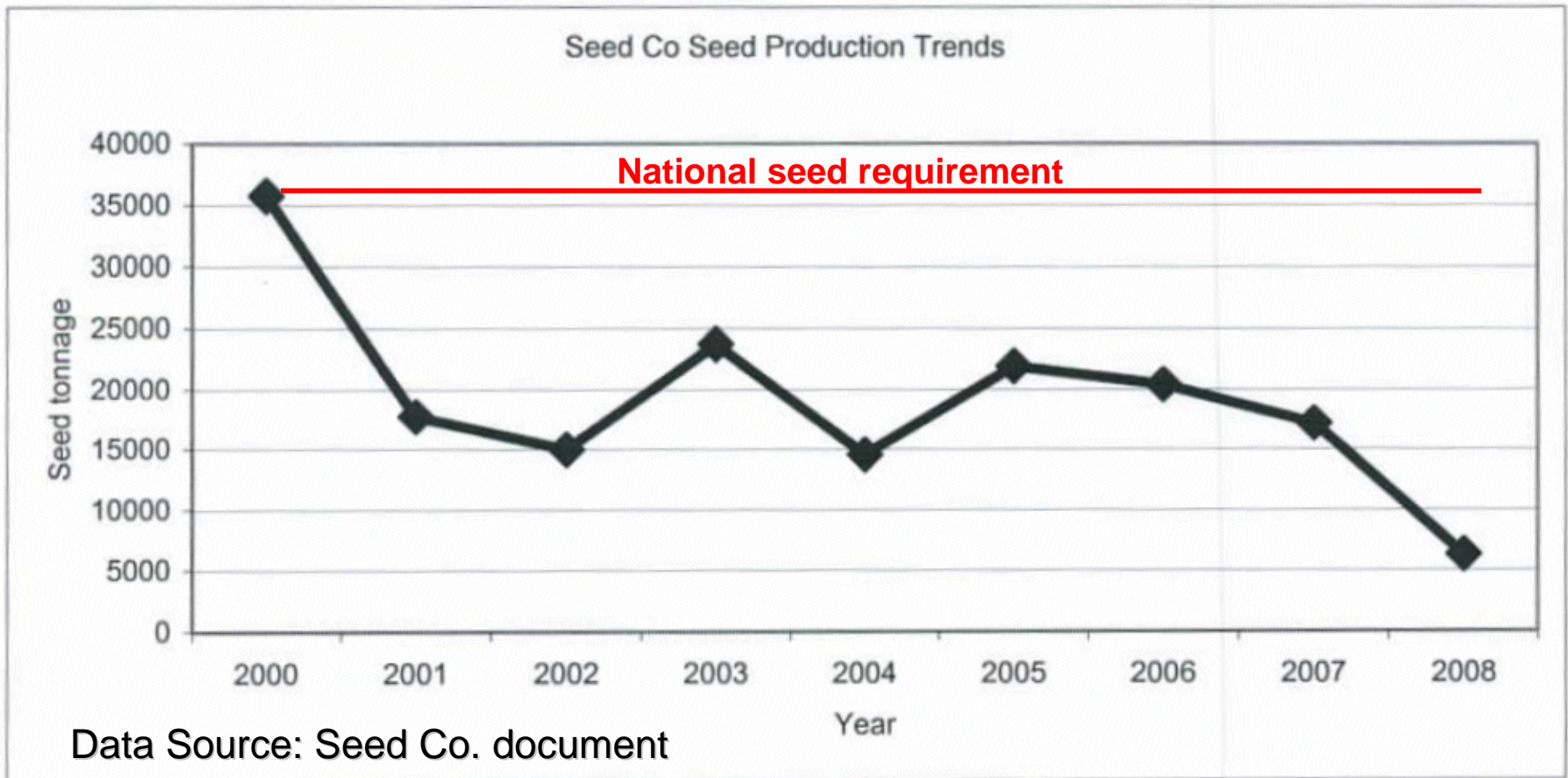


2009 Zimbabwe Crop Assessment Route

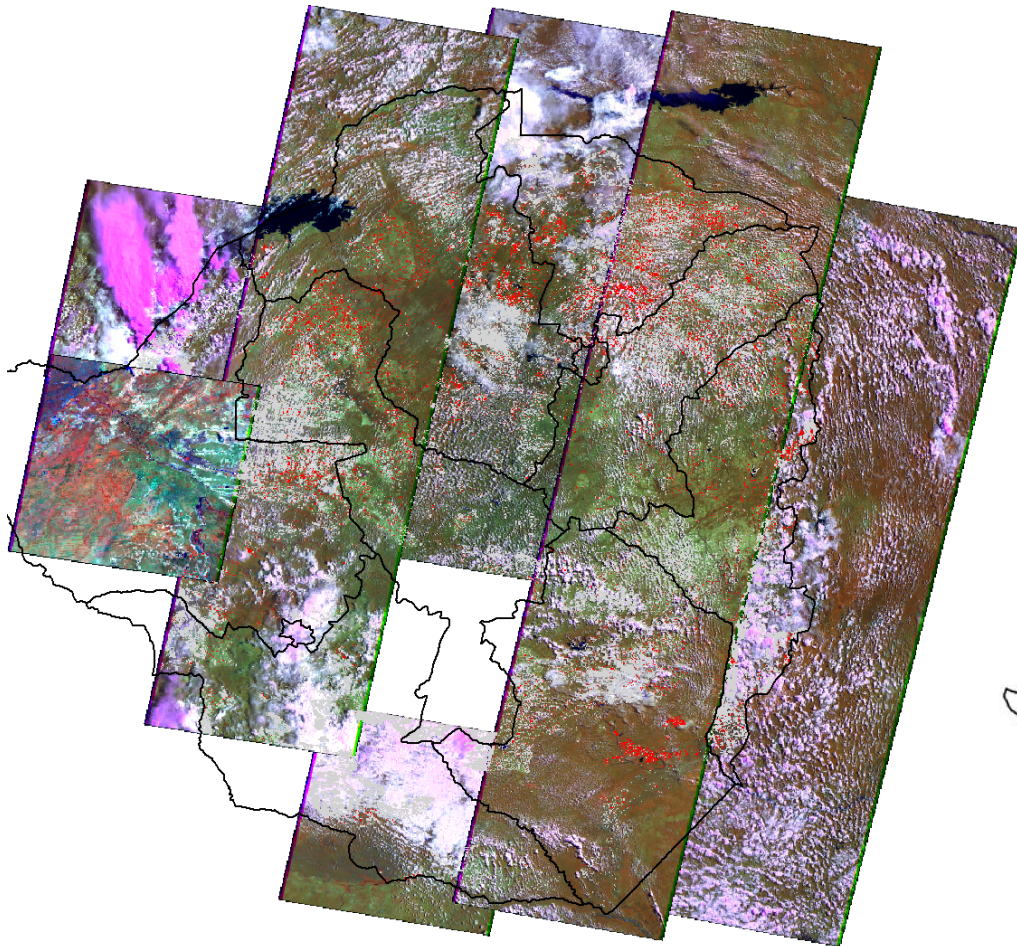


Zimbabwe's National Seed Production Down, but AGRITEX Corn Area Estimates Up

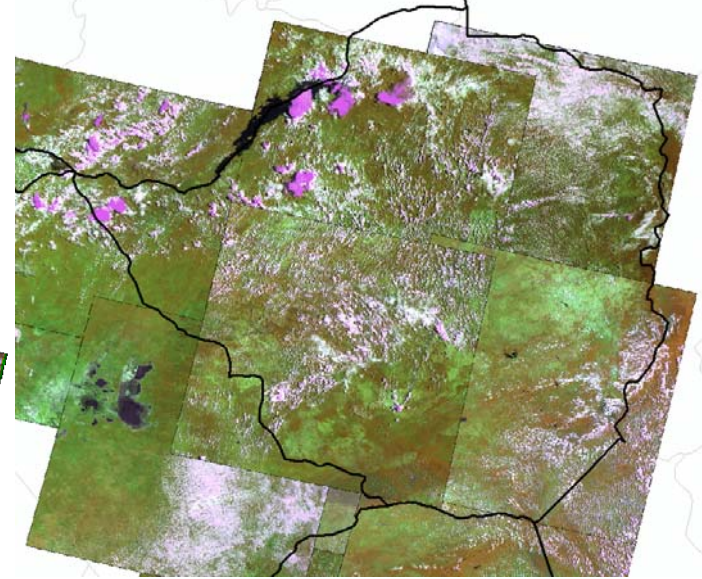


Satellite Coverage: Jan-April 2000 and 2009

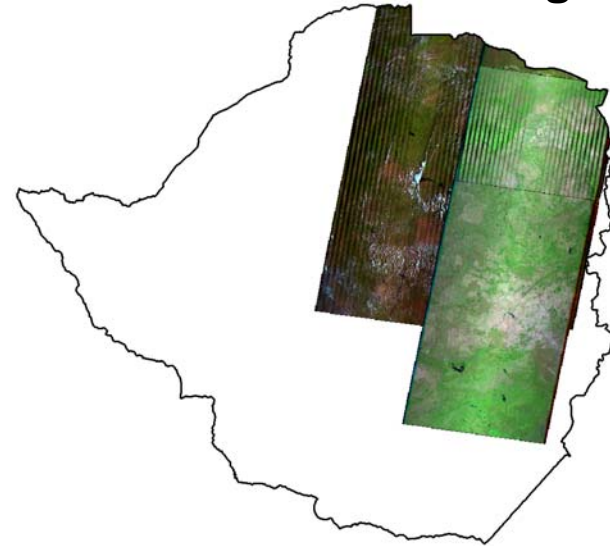
2000 L-7 Coverage



2009 AWiFS Coverage



2009 L-7 Coverage



All imagery processed and crop masks developed by GDA Corp.

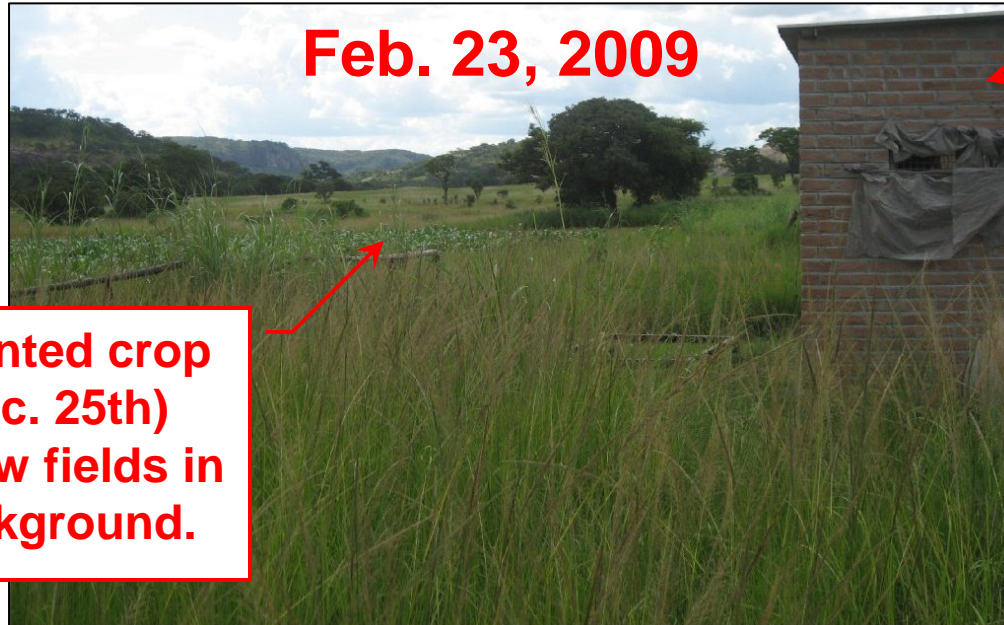
2007/2009 Comparison near Chitungo, Zimbabwe



Grain-filling stages and crop taller than people



S 17° 39.500' E 031° 21.651' 4096 ft 02/26/2007 4:15:15 PM



Same building

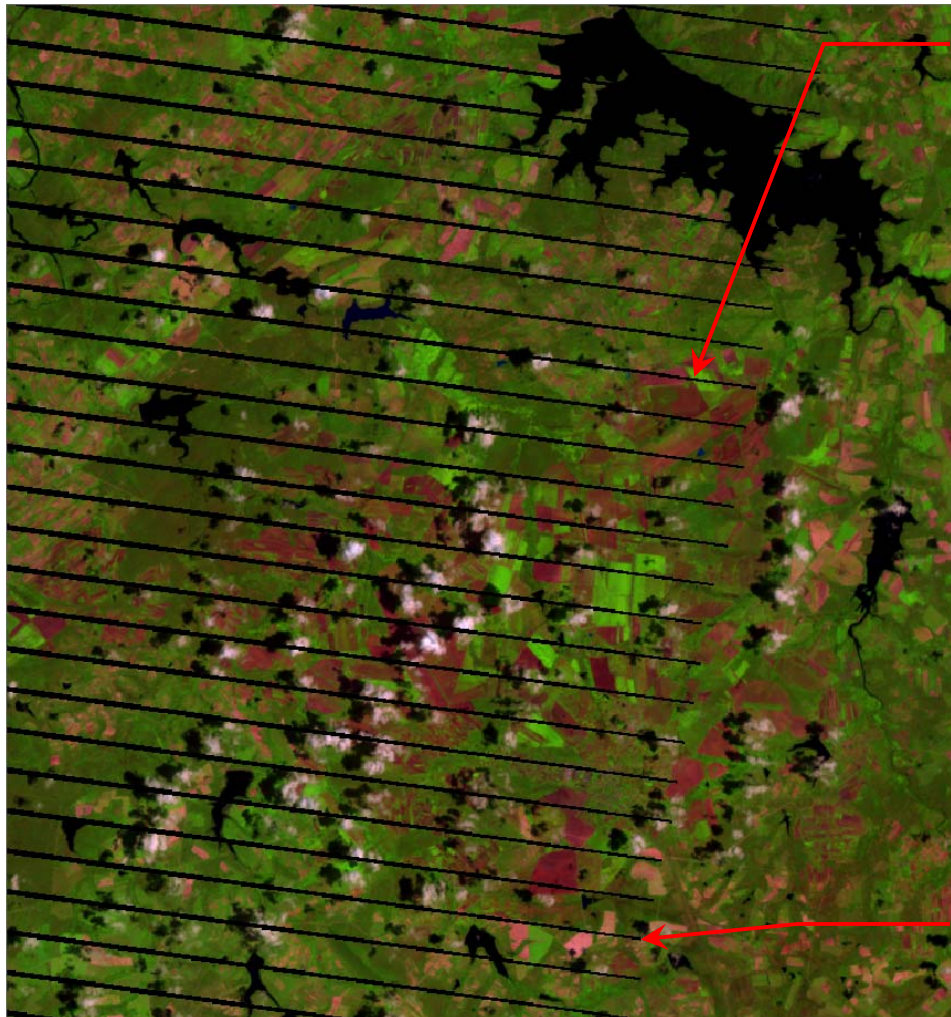
Late-planted crop (on Dec. 25th) and fallow fields in the background.

S 17° 39.486' E 031° 21.667' 1237 m 02/23/2009 3:04:04 PM

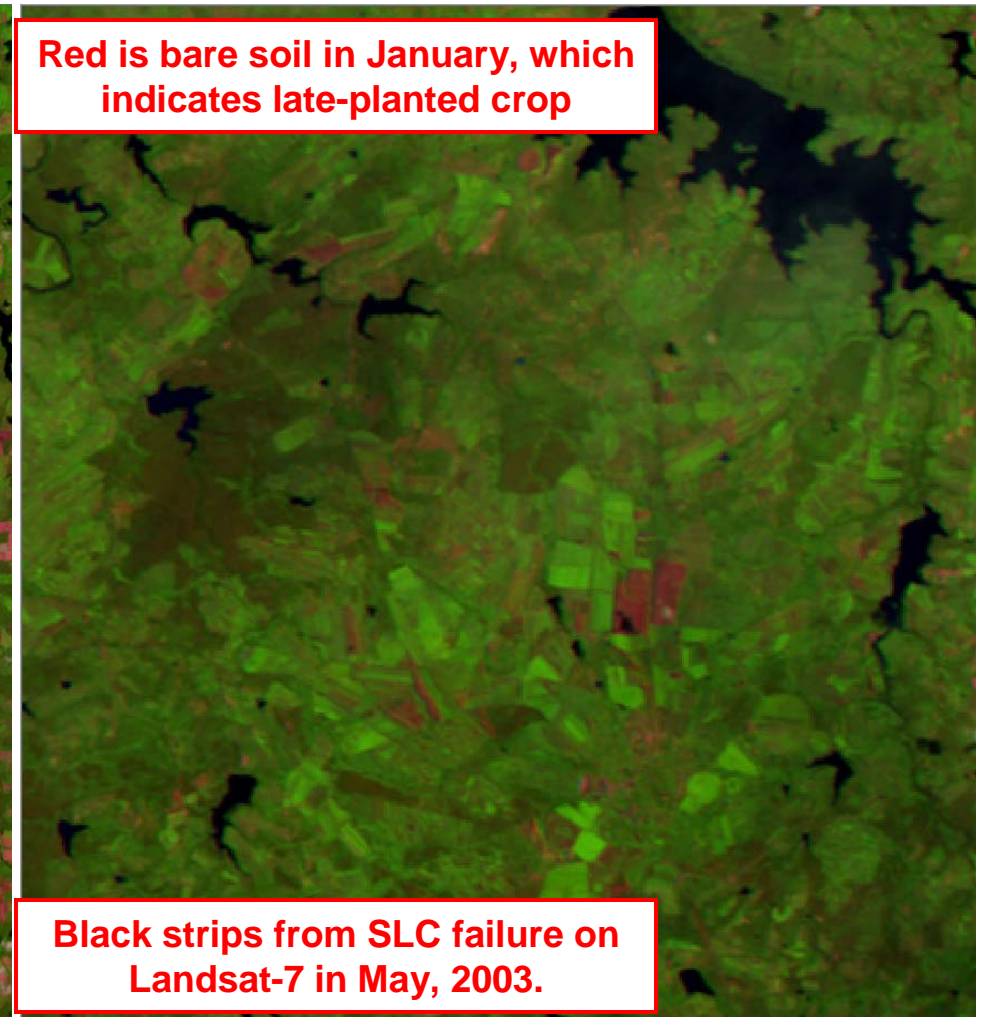
Late-Planted Crop Near Blanket, Zimbabwe

Landsat-7: Jan 10, 2009

AWiFS: March 23, 2009



Red is bare soil in January, which indicates late-planted crop



Black strips from SLC failure on Landsat-7 in May, 2003.

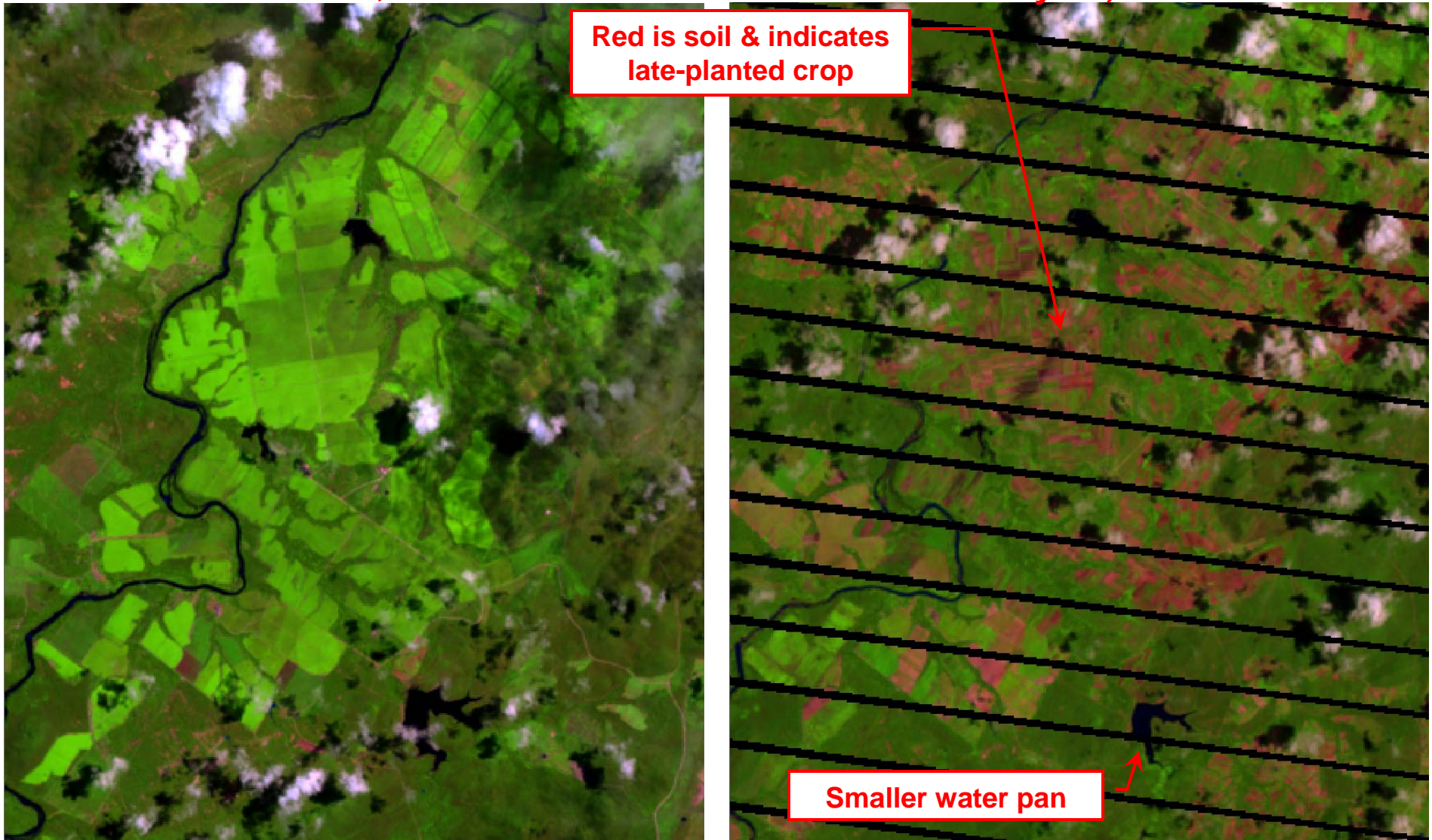
Location (E30.597811long, S17.451926lat) is near Blanket, Zimbabwe;
and Landsat-7 and AWiFS imagery retrieved by GDA Corp.

USDA/FAS/OGA

Significant field partitioning, fallow fields, late-planted crops & smaller water pans between 2000 & 2009.

March 06, 2000

January 10, 2009

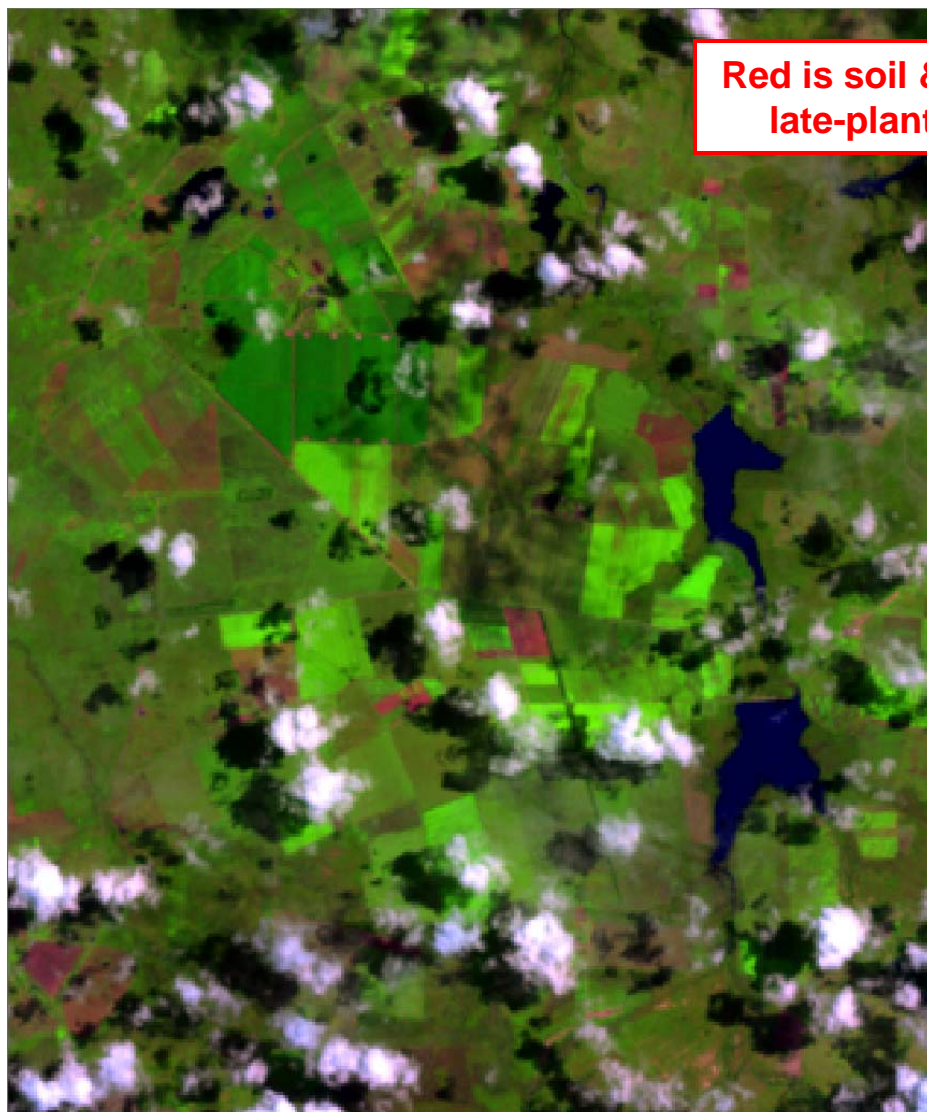


Location (E30.40915422long, S16.93647607lat) is near Chimbadzi & Raffingora; and Landsat-7 imagery retrieved by GDA Corp.

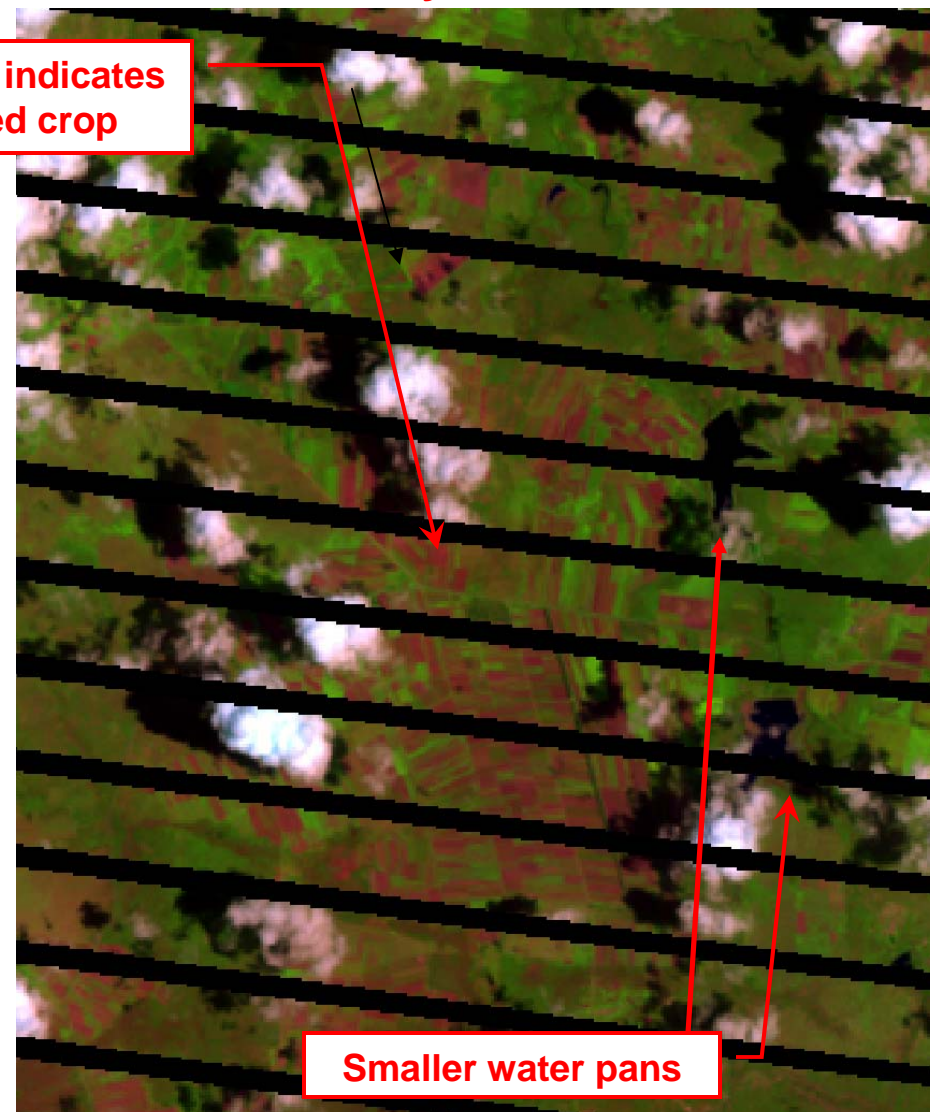
Significant field partitioning, fallow fields, late-planted crops & smaller water pans between 2000 & 2009.

March 06, 2000

January 10, 2009



Red is soil & indicates late-planted crop



Smaller water pans

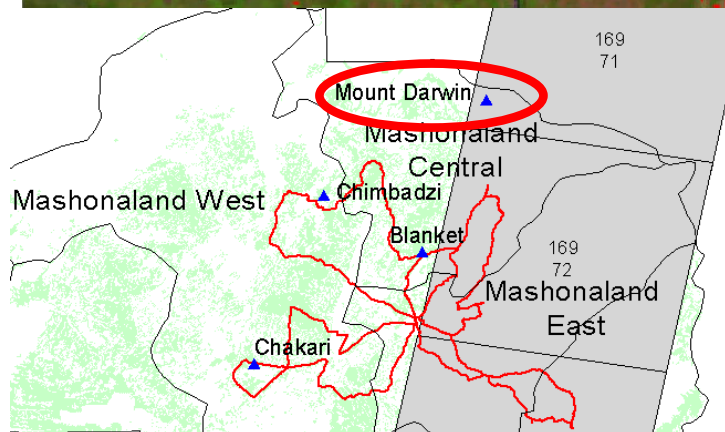
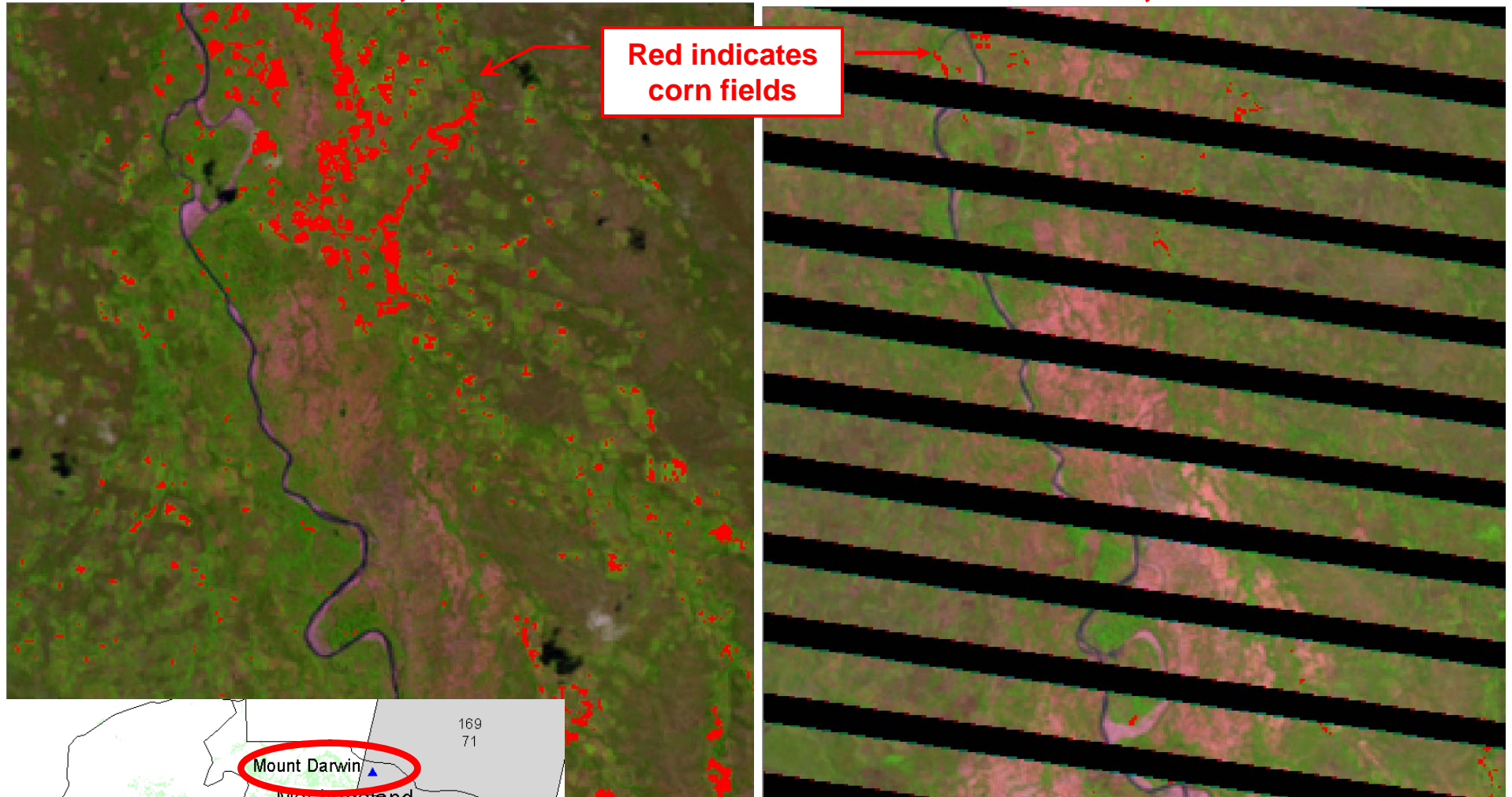
Location (E29.92434523long, S18.10574247lat) is between Chakari & Chegutu; and Landsat-7 imagery retrieved by GDA Corp.

Landsat-7 Imagery Shows Less Corn Fields between 2000 & 2009

March 31, 2000

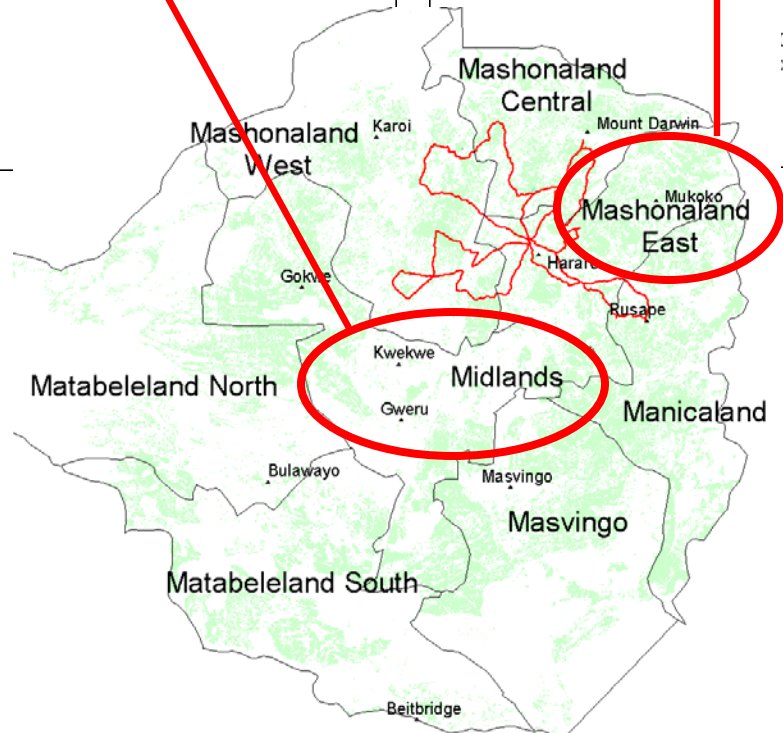
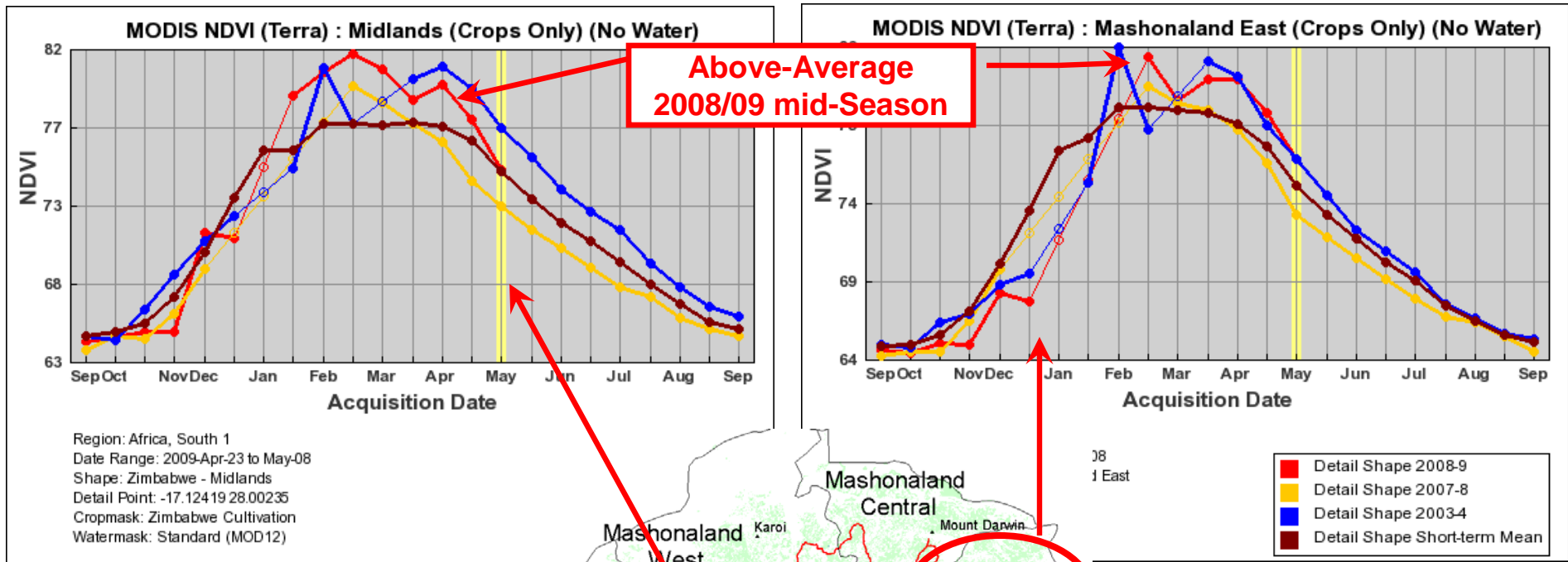
March 24, 2009

Red indicates
corn fields



Location (E31.534724long, S16.27443lat) is near Mount Darwin and Landsat-7 imagery retrieved by GDA Corp.

NDVI-MODIS Time-Series during 2008/09 Growing Season



Data Source: USDA/NASA GLAM (Global Agriculture Monitoring) Project
<http://pekko.geog.umd.edu/usda/demo1/>

Percent Change in Area According to Satellite Estimates & AGRITEX

| Data Source Provinces | 2001 CFSAM/AGRITEX | | | 2009 AGRITEX | | | AGRITEX | Landsat-7/AWIFS | 2009 Satellite Estimate |
|--------------------------|-----------------------|------------------|------------|------------------|------------------|------------|------------------------------|------------------------------|---------------------------------------|
| | Area(ha) | Prod (tons) | %Prod | Area(ha) | Prod (tons) | %Prod | Percent Area Change 09/01 | Percent Area Change 09/00 | (Top Provinces Adjusted) Area (ha) |
| Manicaland | 158,629 | 176,919 | 12 | 216,585 | 168,936 | 14 | 37 | -8 | 145,939 |
| Mashonaland Central | 140,175 | 247,981 | 17 | 180,094 | 174,691 | 14 | 28 | -9 | 127,559 |
| Mashonaland East | 220,136 | 293,628 | 20 | 241,768 | 186,161 | 15 | 10 | 1 | 222,337 |
| Mashonaland West | 198,919 | 475,210 | 32 | 195,679 | 246,556 | 20 | -2 | -28 | 143,222 |
| Midlands | 209,348 | 83,680 | 6 | 301,765 | 202,183 | 16 | 44 | -59 | 209,348 |
| Masvingo | 170,270 | 114,244 | 8 | 207,459 | 141,072 | 11 | 22 | -69 | 170,270 |
| Matebeleland North | 90,076 | 65,052 | 4 | 80,971 | 51,821 | 4 | -10 | -87 | 90,076 |
| Matebeleland South | 35,513 | 10,034 | 1 | 97,459 | 71,145 | 6 | 174 | -93 | 35,513 |
| Harare | No data | No data | | No data | No data | | | 10 | |
| National Total | 1,223,066 | 1,466,748 | 100 | 1,521,780 | 1,242,565 | 100 | | | 1,144,264 |

Note: All satellite imagery processing and data extraction conducted by GDA Corp.

Farm Class Percent Change in Area from 2000-2009 (Satellite Estimates)

| Summary FARM class | 2000-2009 Percent Area Change (%) |
|------------------------|--------------------------------------|
| A1 | -26 |
| A2 | -19 |
| Communal Lands | -34 |
| Large Scale Commercial | -37 |
| Old Resettlement Areas | -16 |
| Small Scale Commercial | -36 |
| TOTAL | -30 |

Note: All satellite imagery processing and data extraction conducted by GDA Corp.

Zimbabwe Farm Classifications and Survey Routes during 2006, 2007 & 2009

Routes

2009 Track



2007 Track



2006 Track



Farm Classifications



A1



A2



Communal Lands



Large Scale Commercial Farms



Old Resettlement Areas



Small Scale Commercial Farms

