

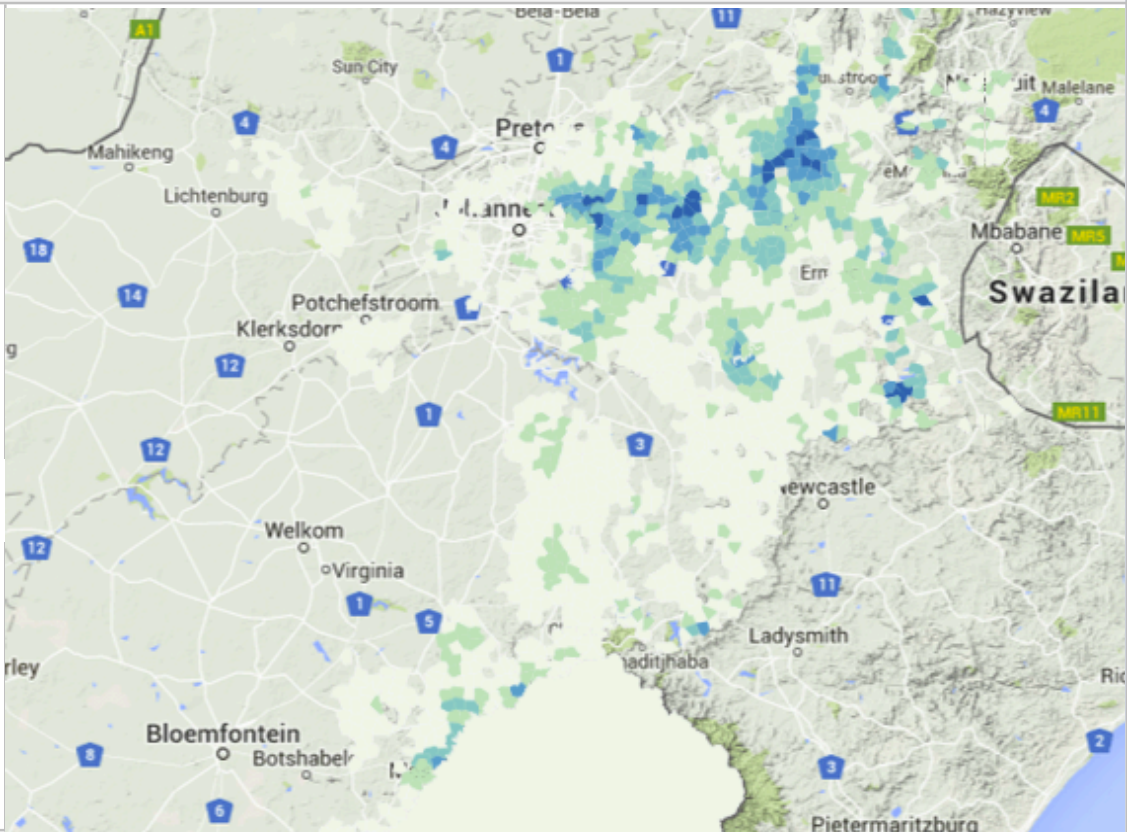
THEME: AGRICULTURAL RESIDUES

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Feasible Extraction of Maize Residues from Formal Agriculture

Legend

- Major Cities and Towns
- Sugar Production (t/ha)
 - 0.6073 - 5596.7241
 - 5596.7241 - 16586.2955
 - 16586.2955 - 33657.1201
 - 33657.1201 - 65328.8182
 - 65328.8182 - 112096.0147
- Provinces



Author(s): Hugo, W
Date: 2015

Meta-Data

| | |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Title | Feasible Extraction of Maize Residues from Formal Agriculture |
| File Name | MESO_MRE.shp |
| Author(s) | Hugo, W |
| Publication Date | 2015 |
| Citation | Hugo, W, 2014. Feasible Extraction of Maize Residue from Formal Agriculture. In: Hugo W. (Ed). 2015. South African BioEnergy Atlas. DST, Pretoria, RSA, Section W05_01. |
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| Abstract | Data was derived from the following sources: * Extent of commercial maize farming in Gauteng, North West, Free State, and Mpumalanga was obtained from the Department of Agriculture (2014). * On such land, production of Maize was estimated from scaled productivity (Schulze et. al. yield estimates applied to recent average (10 year) maize production per province, derived from Department of Agriculture Annual Statistics. * Residue production was calculated based a sustainable yield-dependent formula - see discussion in BioEnergy Atlas fact sheets. |
| Keywords | biomass, potential, agriculture, residue, maize |

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|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Caveats | http://bea.dirisa.org/resources/metadata-sheets/WP05_01_META_MRE.pdf |
| Web Meta-Data | |
| Web Resource | http://app01.saeon.ac.za:8085/geoserver/WP05/wms?service=WMS&version=1.1.0&request=GetMap&layers=WP05:MESO_MRE&styles=&bbox=16.451920000028533,-34.83416989569374,32.892531746697685,-22.125030000001036&width=512&height=395&srs=EPSG:4326&format=application/openlayers |

Methodology/ Protocol

| | |
|------------------------|---------------------------|
| Processing/ Provenance | <i>As described above</i> |
|------------------------|---------------------------|

Important Attributes

| | |
|---------|--------------------------------------------------------------------------|
| MESO_ID | Meso-zone ID |
| INF_HA | Subsistence and Underutilised farmland in mesozone, ha |
| YIELD | Maize Yield, t/ha |
| RES_1 | Residue harvestable, t/annum, based on fixed percentage (10% of residue) |
| RES_2 | Residue harvestable, t/ annum, based on safe extractable margin |

References and Sources

| | |
|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| [1] | Schulze, R.E. and Walker, N.J. 2007. Maize Yield Estimation. In: Schulze, R.E. (Ed). 2007. South African Atlas of Climatology and Agrohydrology. Water Research Commission, Pretoria, RSA, WRC Report 1489/1/06, Section 16.2. |
| [2] | "Schulze, R.E. 2007. Primary Production. In: Schulze, R.E. (Ed). 2007. South African Atlas of Climatology and Agrohydrology. Water Research Commission, Pretoria, RSA, WRC Report 1489/1/06, Section 14.1." |
| [3] | Crop Boundaries for South Africa - Obtained from Department of Agriculture, Fisheries, and Forestry, 2014. Refer to http://app01.saeon.ac.za:8085/geoserver/WP03/wms?service=WMS&version=1.1.0&request=GetMap&layers=WP03:cropland_rsa&styles=&bbox=17.87917501867629,-34.72917318565405,32.84584168833629,-22.143699645996094&width=512&height=430&srs=EPSG:4326&format=application/openlayers |
| [4] | Hugo, W 2014. Crop Yield Ratios and Potential for Yield Improvement, South African BioEnergy Atlas, DST, Pretoria, South Africa, 2015. Section WP03_00_CROP_YIELD |
| [5] | Hugo, W (2015) Sustainable Maize Residue Extraction Rates, South African BioEnergy Atlas, DST, Pretoria, South Africa, 2015. Section WP04_05_AgricWaste |