CERRADO SOY DYNAMICS ON THE SCF 61 FOCUS MUNICIPALITIES UPDATED FOR CROP YEAR 2020/21 VS. PRODES 2014-2020

Accomplished by:

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STUDY AREA | 61 Municipalities (25 + 36)
a) Study Area
The territory of the Cerrado biome is 203.94 million hectares, while the area occupied by the 61 SCF municipalities is 33.11 million hectares corresponding 16% of the biome.

b) Soy in crop year 2020/21
The soy planted area in the Cerrado in crop year 2020/21 was 20.00 million hectares, with 5.25 million hectares of soy (26%) planted in the 61 SCF municipalities.

c) Deforestation (PRODES 2014-2020)
In the Cerrado biome the total deforestation, from 2014 to 2020, was 5.71 million hectares, while in the 61 SCF municipalities it was 1.65 million hectares (29% of Cerrado’s deforestation) during the same period.

d) Deforestation (PRODES 2014-2020) converted to soy
The amount of soy in crop year 2020/21 on top of the deforestation observed from 2014 to 2020 was 0.62 million hectares in the Cerrado and 0.40 million hectares in the 61 SCF municipalities (64% of Cerrado’s native vegetation conversion to soy). From 2006/07 to 2013/14, NVC rate to soy was 0.19 Mha/yr, while from 2013/14 to 2020/21 it decreased to 0.09 Mha/yr in the Cerrado.
SOYBEAN EXPANSION ON LAND OTHER THAN SOY | From 2013/14 to 2020/21

Area (Mha)

- Soy Expansion without deforestation - on pasture
- Soy Expansion without deforestation - on corn, cotton or sugarcane
- Soy Expansion without deforestation - on follow and other Uses
- Soy Expansion with deforestation

<table>
<thead>
<tr>
<th>Area (Mha)</th>
<th>Year</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.40 Mha</td>
<td>61 SCF Municipalities 2013/14-2020/21</td>
<td>20.8%</td>
</tr>
<tr>
<td>0.24 Mha</td>
<td>61 SCF Municipalities 2013/14-2020/21</td>
<td>12.5%</td>
</tr>
<tr>
<td>0.65 Mha</td>
<td>Cerrado Biome 2013/14-2020/21</td>
<td>33.8%</td>
</tr>
<tr>
<td>1.74 Mha</td>
<td>Cerrado Biome 2013/14-2020/21</td>
<td>25.4%</td>
</tr>
<tr>
<td>2.67 Mha</td>
<td>Cerrado Biome 2013/14-2020/21</td>
<td>39.0%</td>
</tr>
<tr>
<td>0.62 Mha</td>
<td>Cerrado Biome 2013/14-2020/21</td>
<td>9.0%</td>
</tr>
<tr>
<td>1.82 Mha</td>
<td>Cerrado Biome 2013/14-2020/21</td>
<td>26.6%</td>
</tr>
</tbody>
</table>

Soy Expansion without deforestation - on pastures:
- 0.62 Mha (9.0%)
- 0.24 Mha (12.5%)
- 0.63 Mha (32.9%)
- 2.67 Mha (39.0%)
- 1.82 Mha (26.6%)

Soy Expansion without deforestation - on follow and other Uses:
- 0.65 Mha (33.8%)
- 1.74 Mha (25.4%)
- 2.67 Mha (39.0%)
- 1.82 Mha (26.6%)
- 0.62 Mha (9.0%)

Soy Expansion with deforestation:
- 0.40 Mha (20.8%)
- 0.24 Mha (12.5%)
- 0.65 Mha (33.8%)
- 1.74 Mha (25.4%)
- 2.67 Mha (39.0%)
- 1.82 Mha (26.6%)
- 0.62 Mha (9.0%)
Soybean expansion from crop years 2013/14 to 2020/21 and associated land use changes

<table>
<thead>
<tr>
<th></th>
<th>2013/14</th>
<th>2020/21</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Soy</strong></td>
<td>15.60 Mha</td>
<td>20.00 Mha</td>
</tr>
<tr>
<td><strong>Fallow or other uses</strong></td>
<td>2.67 Mha</td>
<td></td>
</tr>
<tr>
<td><strong>Corn, cotton or sugarcane</strong></td>
<td>1.82 Mha</td>
<td>1.33 Mha</td>
</tr>
<tr>
<td><strong>Pasture</strong></td>
<td>1.74 Mha</td>
<td>1.12 Mha</td>
</tr>
<tr>
<td><strong>Native Vegetation PRODES</strong></td>
<td>0.62 Mha</td>
<td></td>
</tr>
</tbody>
</table>
Soybean expansion from crop years 2013/14 to 2020/21 and associated land use changes

Cerrado Biome without 61 SCF municipalities

<table>
<thead>
<tr>
<th>2013/14</th>
<th>2020/21</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.56 Mha</td>
<td>14.75 Mha</td>
</tr>
<tr>
<td>Soy</td>
<td>Soy</td>
</tr>
<tr>
<td>2.03 Mha</td>
<td>1.08 Mha</td>
</tr>
<tr>
<td>Fallow or other uses</td>
<td>Fallow or other uses</td>
</tr>
<tr>
<td>1.50 Mha</td>
<td>0.67 Mha</td>
</tr>
<tr>
<td>Pasture</td>
<td>Corn, cotton or sugarcane</td>
</tr>
<tr>
<td>1.19 Mha</td>
<td>1.19 Mha</td>
</tr>
<tr>
<td>Corn, cotton or sugarcane</td>
<td>Corn, cotton or sugarcane</td>
</tr>
<tr>
<td>0.22 Mha</td>
<td>0.22 Mha</td>
</tr>
</tbody>
</table>
Soybean expansion from crop years 2013/14 to 2020/21 and associated land use changes

- **2013/14**
  - Soy: 4.04 Mha
  - Corn, cotton or sugarcane: 0.63 Mha
  - Fallow or other uses: 0.65 Mha
  - Native Vegetation PRODES: 0.40 Mha
  - Pasture: 0.24 Mha

- **2020/21**
  - Soy: 5.25 Mha
  - Corn, cotton or sugarcane: 0.45 Mha
  - Fallow or other uses: 0.25 Mha

61 SCF municipalities
AGRICULTURAL APTITUDE FOR SOY EXPANSION IN SCF MUNICIPALITIES

**Area (Mha)**

- **61 SCF Municipalities Anthropic**
  - Native Vegetation: With aptitude in TI, UC (exception APA) and Q - not available: 0.06 (0.4%)
  - Native Vegetation: With aptitude in APP and RL - not available: 0.33 (2.6%)
  - Anthropic: With aptitude in APP and RL - to recover: 2.05 (16.5%)
  - Anthropic: With aptitude in TI, UC (exception APA) and Q - residual areas: 5.25 (42.1%)
  - With aptitude - available: 4.94 (24.2%)

- **61 SCF Municipalities Native Vegetation**
  - With aptitude - available: 2.74 (13.5%)
  - Soy: 0.93 (4.5%)
  - Without aptitude: 11.77 (57.8%)

**Notes:**
- APP – Areas of Permanent Protection
- RL – Legal Reserve
- TI – Indigenous Land
- UC – Conservation Units
- APA – Area of Environmental Protection
- Q - Quilombolas
AGRICULTURAL APTITUDE FOR SOY EXPANSION IN SCF MUNICIPALITIES: ONLY FOR SOY FARMS

**Soy Farms Anthropic**

- Native Vegetation: With aptitude in TI, UC (exception APA) and Q - not available
- Native Vegetation: With aptitude in APP and RL - not available

**Soy Farms Native Vegetation**

- Anthropic: With aptitude in APP and RL - to recover
- Anthropic: With aptitude in TI, UC (exception APA) and Q - residual areas

**Area (Mha)**

- Soy: 0.85, 32.9%
- Native Vegetation: 0.78, 29.9%
- Anthropic: 1.33, 25.1%
- Native Vegetation: 0.00, 0.1%
- Soy Farms: 0.97, 37.2%

**APP – Areas of Permanent Protection; RL – Legal Reserve; TI – Indigenous Land; UC – Conservation Units; APA – Area of Environmental Protection; Q – Quilombolas**
SOYBEAN OF CROP YEAR 2020/21 ON TOP OF NATIVE VEGETATION | PRODES 2014-2020

CERRADO, MATOPIBA and Other States vs. 61 SCF Municipalities

In the 61 SCF municipalities of the Cerrado Biome a total of 397,295 hectares of soy in 2020/21 (93% of it within the MATOPIBA) were on top of native vegetation deforested from 2014 to 2020 (7 years); in no SCF municipalities a total of 220,249 hectares of soy in crop year 2020/21 were on top of native vegetation deforested from 2014 to 2020.
In the 25 SCF municipalities of the Cerrado Biome a total of 265,197 hectares of soy in 2020/21 (98% of it within the MATOPIBA) were on top of native vegetation deforested from 2014 to 2020 (7 years); in no SCF municipalities a total of 352,347 hectares of soy in crop year 2020/21 were on top of native vegetation deforested from 2014 to 2020.
61 SCF Municipalities

56.8% (2.98 million hectares) of soy in crop year 2020/21 was planted on land deforested prior to 2001
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Diferences observed from crop year 2019/20 to 2020/21

1) **In terms of soy area:**
   a) it increased by 1.17 Mha in the Cerrado with 0.35 Mha in the 61 SCF municipalities;
   b) the relative soy area increase in the Cerrado was 6.20% while in the 61 SCF municipalities it was 7.06%;

2) **In terms of deforestation:**
   a) it increased by 0.83 Mha in the Cerrado with 0.23 Mha in the 61 SCF municipalities;

3) **In terms of NVC to soy:**
   a) it increased by 0.14 Mha in the Cerrado with 0.09 Mha in the 61 SCF municipalities. From 2013/14 to 2019/20 the average NVC rate to soy was 0.08 Mha/yr in the Cerrado. However, for the period of 2013/14 to 2020/21 it increased to 0.09 Mha/yr due to the 0.14 Mha of NVC to soy observed in crop year 2020/21.

46 municipalities out of the 61 SCF municipalities are in the MATOPIBA region and they were responsible for 65.6% (89,755 ha) of the total NVC to soy in the Cerrado (136,910 ha) observed in crop year 2020/21. The remaining 15 SCF municipalities located in the Other States region were responsible for only 0.7% (1,003 ha) of the total NVC to soy in the Cerrado observed in crop year 2020/21; therefore, they were not relevant in terms of NVC to soy, in crop year 2020/21. In the remaining municipalities (no SCF municipalities) the NVC to soy was 23.1% (31,665 ha) in the MATOPIBA region and 10.6% (14,487 ha) in the Other States.
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