To aid in understanding the response of soybeans to applications of different doses of boron, Zabini (2021) conducted field experiments comparing doses of B in two different types of soils in different locations in Paraguay. The fertilizer Granubor® (15% B), which is a granular sodium tetraborate pentahydrate, was tested. The experiments were carried out in the locations of Santa Rosa del Monday (Alto Paraná) and Dr. J.E. Estigarribia (Caaguazu), Tables 1 and 2. The experimental design used randomized blocks with four repetitions. The experiments received the same amounts of NPK fertilizers, that is, 107 kg/ha of MAP in the furrows and 100 kg/ha of KCl in top dressing.

Table 1: Chemical and physical characteristics of the soil in the areas used for experiments before the implementation of the experiments. Santa Rosa del Monday (Alto Paraná) (crop 2020-2021)

<table>
<thead>
<tr>
<th>pH Water</th>
<th>Clay</th>
<th>OM</th>
<th>Ca</th>
<th>Mg</th>
<th>K</th>
<th>Al</th>
<th>H+Al</th>
<th>t</th>
<th>T</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.04</td>
<td>42.23</td>
<td>2.63</td>
<td>4.23</td>
<td>1.9</td>
<td>0.12</td>
<td>0.53</td>
<td>5.18</td>
<td>6.37</td>
<td>11.02</td>
</tr>
<tr>
<td>V</td>
<td>%</td>
<td>%</td>
<td>cmolc/dm³</td>
<td>mg/dm³</td>
<td>mg/L</td>
<td>cmolc/dm³</td>
<td>mg/dm³</td>
<td>mg/dm³</td>
<td>mg/dm³</td>
</tr>
<tr>
<td>52.99</td>
<td>8.32</td>
<td>28.12</td>
<td>37.30</td>
<td>6.40</td>
<td>0.70</td>
<td>4.05</td>
<td>35.05</td>
<td>136.68</td>
<td>3.69</td>
</tr>
</tbody>
</table>

Table 2: Chemical and physical characteristics of the soil in the areas used for experiments before the implementation of the experiments. Dr. J.E. Estigarribia (Caaguazu) (crop 2020-2021).

<table>
<thead>
<tr>
<th>pH Water</th>
<th>Clay</th>
<th>OM</th>
<th>Ca</th>
<th>Mg</th>
<th>K</th>
<th>Al</th>
<th>H+Al</th>
<th>t</th>
<th>T</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.30</td>
<td>12.00</td>
<td>1.13</td>
<td>1.49</td>
<td>0.36</td>
<td>0.15</td>
<td>0.11</td>
<td>3.17</td>
<td>2.11</td>
<td>5.17</td>
</tr>
<tr>
<td>V</td>
<td>%</td>
<td>%</td>
<td>cmolc/dm³</td>
<td>mg/dm³</td>
<td>mg/L</td>
<td>cmolc/dm³</td>
<td>mg/dm³</td>
<td>mg/dm³</td>
<td>mg/dm³</td>
</tr>
<tr>
<td>38.68</td>
<td>5.21</td>
<td>35.52</td>
<td>46.38</td>
<td>3.69</td>
<td>0.25</td>
<td>1.62</td>
<td>87.37</td>
<td>88.86</td>
<td>2.63</td>
</tr>
</tbody>
</table>
Results
At the Dr. J.E. Estigarribia (Caaguazu) site, where the soil texture is sandy, there was an increase in productivity of 532 kg/ha (8.87 bags/ha) in the soybean crop compared to the control, with application of 14 kg/ha of Granubor (2 kg/ha of boron).

At the Dr. Santa Rosa del Monday (Alto Paraná) site, where the soil texture is clayey, there was an increase in productivity of 408 kg/ha (6.8 bags/ha) in the soybean crop compared to the control, with application of 14 kg/ha of Granubor (2 kg/ha of boron).

Reference