Database on Methane Emissions from Rice Fields

(IRRI-UNDP Methane Project)

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Contents

- where and how data are collected (replicability)
- emission patterns (QA/QC)
- controlling factors associated with EF (data to store)
- conclusion & recommendation
Irrigated Rice
Rainfed Rice

Deepwater Rice
Different Management Practices

- water management
- organic and inorganic amendments
- cultivar
- crop establishment

Diel Pattern of Methane Emission
Seasonal pattern of CH$_4$ Emission as affected by C input

Seasonal pattern of CH$_4$ Emission as affected by water management
Seasonal pattern of CH$_4$ Emission as affected by cultivars

Effect of soil type

Seasonal CH4 emission (kg/ha); pure NPK + local irrigation

IRRIGATED:
DS = 163 (5)
WS = 132 (10)

RAINFED:
DS = 50 (6)
WS = 81 (11)
### Table 4-9 (IPCC Guidelines)
Representative Methane Emissions from Rice Paddy Fields in Various Locations of the World

<table>
<thead>
<tr>
<th>Country</th>
<th>Location</th>
<th>Range of CH4 flux (mg/m²/hr)</th>
<th>Season total (g/m²)</th>
<th>Experimental Treatment</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>Beijing</td>
<td>14.6-48.9</td>
<td>27-91</td>
<td>OM, WM</td>
<td>Chen et al., 1993</td>
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<td></td>
<td>Beijing</td>
<td>1.9-48.9</td>
<td>5.3-100.9</td>
<td>MF, OM, ST, WM</td>
<td>Shao, 1993</td>
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<td>Hangzhou, Zhejiang</td>
<td>6.9-50.6</td>
<td>14-82</td>
<td>MF, OM, SE</td>
<td>Wassmann et al., 1993a</td>
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<td>India</td>
<td>Cuttack, Orissa</td>
<td>2.7-7.2</td>
<td>7-19</td>
<td>CU</td>
<td>Mitra, 1992</td>
</tr>
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<td>Indonesia</td>
<td>Taman Bogo, Lampung</td>
<td>18.0-27.1</td>
<td>31-47</td>
<td>MF, OM</td>
<td>Nugroho et al., 1994a</td>
</tr>
<tr>
<td>Japan</td>
<td>Ryugasaki</td>
<td>2.8-15.4</td>
<td>11-28</td>
<td>MF, OM</td>
<td>Yagi and Minami, 1990a</td>
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<td>Philippines</td>
<td>Los Banos</td>
<td>0.8-18.5</td>
<td>2-42</td>
<td>MF, OM</td>
<td>Neue et al., 1994</td>
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<tr>
<td>Thailand</td>
<td>Ayutthaya</td>
<td>3.3-7.9</td>
<td>13-20</td>
<td>CU, OM, WM</td>
<td>Siriratpiraya, 1990</td>
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<td>USA</td>
<td>Crowley, Louisiana</td>
<td>12.6-85.0</td>
<td>22-149</td>
<td>MF, OM, SE</td>
<td>Lindau and Bollich, 1993</td>
</tr>
</tbody>
</table>

### Conclusion and Recommendations

**Reference**
- name of journal
- authors
- date published
- title of article

**Brief description of methods**
- equipment
- sampling strategy

**Unit of measurement**
- water management
- amendments
- cultivar

**Experimental treatment**
- water management
- amendments
- cultivar

**Location**
- name
- latitude
- longitude
- soil type
- ecosystem

**Institute**
- name of institute

**Country**
- name of country
References