“Cultivation practices of Cowpea (*Vigna unguiculata* (L) Walp) and Ricebean (*Vigna umbellata* (Thunb) Ohwi and Ohashi) as fodder crop.”

*Division of Plant Breeding & Genetics
Krishi Vigyan Kendra, Hengbung, Senapati District
Manipur – 795129.*
Introduction:
Ricebean and Cowpea is grown predominantly under rainfall conditions in a mixed farming system in the North Eastern region of India. The foliage, green pods, immature seeds and flowers are readily eaten by animals. Being rich in proteins and containing many other nutrients like fat, carbohydrate, calcium and iron, the crops forms excellent forage.

Climate & Soil:
The crops are well adapted to moderately humid tropic and sub tropical region up to 1200-1500 m elevation. They thrive best between 27-35°C temperature but cannot tolerate cold and frost.

Well drained loam or slightly heavy soils of pH 5.0-6.5 are best suited for these crops.

Land preparation:
2-3 ploughing followed by planking to get fine tilth is necessary.

Sowing time:
In hill conditions these crops are sown in Mid June-Mid July before the onset of monsoon.

Seed & Sowing:
Seed rate – 30-35 Kg/ha
Spacing – 30 cm row to row and 10 cm plant to plant

Manures & fertilizers:
FYM @ 2-3 tonnes/ha may be applied for higher yield.
20 kg N and 80 kg P₂O₅/ha has to be applied as basal at the time of ploughing.

Weed management:
Hoeing and weeding have to be given as and when necessary.

Pest & Disease management:
In cowpea, seed treatment with Carbendazim @ 2g/Kg followed by two sprays of neem kernel extract @ 3% in 30 & 45 days crops is the most economical and productive measure for managing pest in an integrated way.

In ricebean, reports on serious disease problem have not so far been identified. But if require, one spray of systemic fungicide like Carbendazim @ 1g/l of water may be sprayed. For controlling pest like aphids, flea beetle etc. Spraying of Malalthion 50 EC @ 1-1.5 l/ha in 500l may be applied.

But, in forage crops use of resistant varieties and cultural practices like early planting, destruction of crop residues, crop rotation are to be adopted avoiding use of chemicals.

Harvesting:
At 60-80 days of sowing or 50% flowering.

Green fodder yield:
It differs from variety to variety which are cultivated in the North Eastern region.

Cultivated cowpea varieties

<table>
<thead>
<tr>
<th>Varieties</th>
<th>Yield</th>
</tr>
</thead>
<tbody>
<tr>
<td>UPC-287, UPC-5286, UOC-9202</td>
<td>30-45 tonnes/ha</td>
</tr>
<tr>
<td>UPC-4200</td>
<td>35-45 tonnes/ha</td>
</tr>
<tr>
<td>Bundel Lobia-1</td>
<td>30-35 tonnes/ha</td>
</tr>
<tr>
<td>UPC-618, UPC-622</td>
<td>35-40 tonnes/ha</td>
</tr>
</tbody>
</table>

Cultivated ricebean varieties

<table>
<thead>
<tr>
<th>Varieties</th>
<th>Yield</th>
</tr>
</thead>
<tbody>
<tr>
<td>K-1</td>
<td>20-35 tonnes/ha</td>
</tr>
<tr>
<td>Bidhan-1</td>
<td>25-35 tonnes/ha</td>
</tr>
<tr>
<td>Bidhan-2</td>
<td>25-35 tonnes/ha</td>
</tr>
</tbody>
</table>

Prepared by:
Dr. Telem Ratan Singh
Subject Matter Specialist (Plant Breeding & Genetics) KVK- Senapati, Hengbung, Senapati District, Manipur.