Scene of Tea Fields in Japan

Conventional Field
Field in Snow
Field for Riding-type Machine
Severe Shading Field
Light Shading Field

Change of Tea Fields by Extension of Cultivar

Seedling
Yabukita
Cutting bed after one year

Trend of Japanese Green Tea Production Area with Superior Cultivars

Difference between seedling and clonal propagation

<table>
<thead>
<tr>
<th></th>
<th>Seedling</th>
<th>Clonal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nursery bed</td>
<td>Not necessary</td>
<td>Necessary</td>
</tr>
<tr>
<td>Cost of nursery</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>Root system</td>
<td>Tap</td>
<td>Lateral</td>
</tr>
<tr>
<td>Early growth</td>
<td>Good</td>
<td>Bad</td>
</tr>
<tr>
<td>Tea field</td>
<td>Not uniform</td>
<td>Uniform</td>
</tr>
</tbody>
</table>

Spread of superior cultivars by cutting

Outline of characteristics of main cultivars

<table>
<thead>
<tr>
<th></th>
<th>Sunmido</th>
<th>Tuyuhikari</th>
<th>Yabukita</th>
<th>Kanayamidori</th>
<th>Okumidori</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plucking time</td>
<td>Early</td>
<td>Slightly early</td>
<td>Intermediate</td>
<td>Slightly late</td>
<td>Late</td>
</tr>
<tr>
<td>Yield</td>
<td>High</td>
<td>Very high</td>
<td>High</td>
<td>High</td>
<td>Very high</td>
</tr>
<tr>
<td>Quality</td>
<td>Very good</td>
<td>Very good</td>
<td>Very good</td>
<td>Good</td>
<td>Very good</td>
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<tr>
<td>Cold injury</td>
<td>Severe</td>
<td>Fairly light</td>
<td>Light</td>
<td>Fairly light</td>
<td></td>
</tr>
<tr>
<td>Pest injury</td>
<td>Weak</td>
<td>Strong</td>
<td>Strong</td>
<td>Slightly weak</td>
<td></td>
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</tbody>
</table>
Cultivation of Japanese Green Tea

To make it the tea field which suited mechanization for plucking, the frame formation after transplanting is most important.

Change of Plucking Methods

Hand plucking
Portable machine for two persons
Riding-type plucking machine

Plucking Methods of New Shoots

<table>
<thead>
<tr>
<th>Methods</th>
<th>The amount of new shoots per day per person</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hand plucking</td>
<td>10 ~ 15 kg</td>
</tr>
<tr>
<td>Hand-shear plucking</td>
<td>100 ~ 200</td>
</tr>
<tr>
<td>Mechanical plucking</td>
<td></td>
</tr>
<tr>
<td>Portable machine for two persons</td>
<td>700 ~ 1,000</td>
</tr>
<tr>
<td>Riding machine</td>
<td>4,000 ~ 5,000</td>
</tr>
<tr>
<td>Self-rail-tracking machine</td>
<td>2,000 ~ 3,000</td>
</tr>
</tbody>
</table>

Methods of Trimming and Pruning

Methods of trimming and pruning
A: light trimming of canopy
B: deep trimming of canopy
C: medium pruning

Tea field after pruning
Deep Trimming of Canopy

Difference between the hand plucking and the mechanical plucking tea fields

★ A new shoot is chosen and it plucking
★ The amount of plucked shoot is 10 - 15kg/day
★ Plucking method for high grade tea

★ All the new shoots are plucked in fixed height
★ The amount of plucked shoot is 700 ~ 1000kg/day using portable machine for two person
★ Plucking method for middle grade tea

Fertilizer application
Deep plow subsoiler
Plucking of new shoots

Cultivation of Japanese Green Tea

Time of fertilizer application in Shizuoka Prefecture


Fertilizer Dressing
Spring dressing
Pop-up dressing
Summer dressing
Mg dressing
Deep plowing
Plucking
Fertilizer dressing

Deep Trimming of Canopy
Frost Protection

The Principle of Air Stirring Method (Anti-frost fan)

Covering Culture in Shizuoka

Covering Culture to produce high grade tea

Fertilizer Application

Biosynthesis of Theanine (Umami)
Umami increases by Covering Culture to produce high-grade tea. Gyokuro and Tencha, which are known as the finest tea in Japan, is made from the leaves grown under the ceiling-shelf covering.

Thank you for your kind attention