

Characteristics of Japanese Green Tea

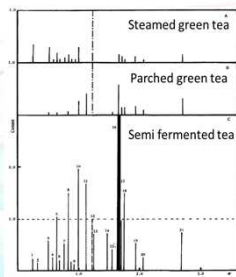
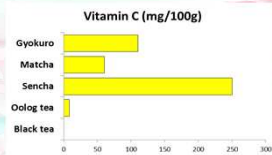


Fig.4. Gas chromatograms of steamed green tea, parched green tea and semi-fermented tea made from fresh leaves plucked on the same day. (Tadakazu TAKEO etc. 1985)



- Color of poured tea is green
- Components are quickly eluted for steam method tea
- Amino acid content is high, catechin small amount of high amino acid content
- Aroma have freshly grassy flavor
- Shape is needle-like with firmly twist
- The content of vitamin C is high
- Japanese green tea has a long history and high cultural aspect

Difference between seedling and clonal propagation

	Seedling	Clonal
Nursery bed	Not necessary	Necessary
Cost of nursery	Low	High
Root system	Tap	Lateral
Early growth	Good	Bad
Tea field	Not uniform	Uniform



Seedling field Clonal field

Plucking Methods of New Shoots



Hand plucking



Hand-shear plucking



Portable machine for two persons



Riding-type plucking machine

Plucking efficiency

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

Mechanization has become necessary due to rise in labor costs and declining labor force

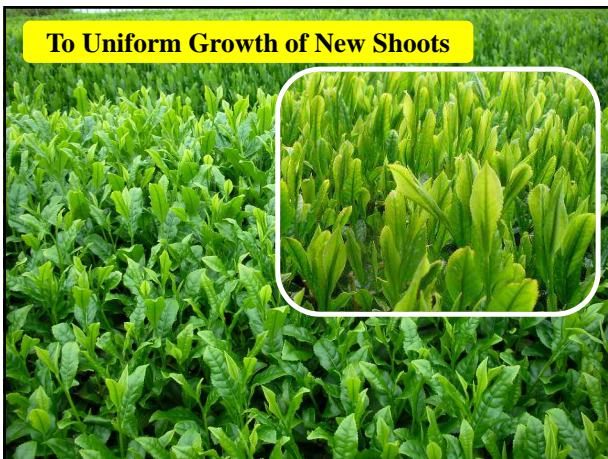
Difference between the hand and the mechanical plucking



- ★ 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 midle grade tea

To Uniform Growth of New Shoots



Difference between the hand plucking and the mechanical plucking

Hand plucking The plucking of the shoot in which the delayed shoot and the new shoot were mixed is repeated



Mechanical plucking The plucking of the only new shoot by skiffing



The point for making a plucking surface of tea uniform

- 1) Thickness of the branch which constitutes leaf layer is made uniform.
- 2) The size of a leaf is made uniform.
- 3) The aging of stem (branch) is made uniform.
- 4) From the same position to a new shoot coming out.



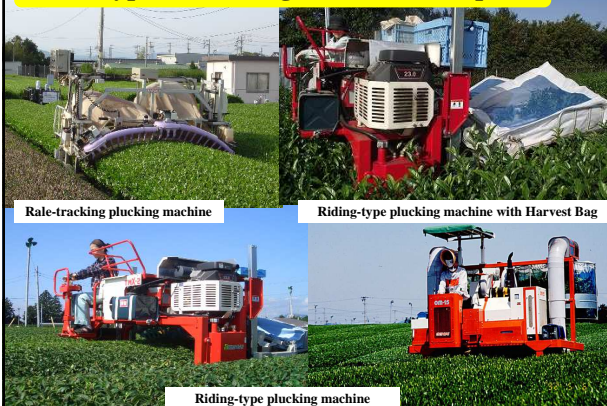
The control by trimming and pruning

Tea field for the use of plucking machine

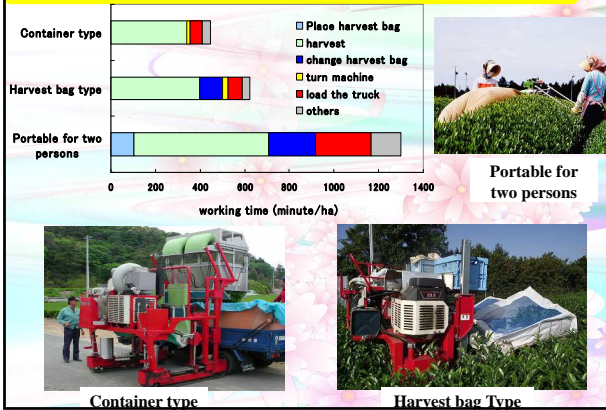
- ★ The plucking surface of tea is uniform
- ★ The growth of new shoot is uniform



The Type of Plucking Machines in Japan



Operating Efficiency of Riding-type Machine



For the success of tea industry

1. Increase in labor cost, decrease in labor force
⇒ From hand plucking to mechanization
2. Increase in health consciousness
⇒ Deepening of functional research and PR
3. Diverse consumer needs
⇒ Development of tea type and promotion of other uses
4. Raising the cultural values of tea
⇒ Preservation of tea tradition, habitalization and utilization as tourism resources