Fermented Plant Juice (FPJ)

Cho Global Natural Farming (CGNF)
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- A fermented extract of the plants.
- Helps crops to absorb nutrients directly for growing healthy and enabling their potentiality.
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1. Origin of FPJ

- The ‘KIMCHI’ soup
2. Principles of FPJ

- The process of fermentation

1) The recognition of ‘each other’
   (translator's note: between microbes and ingredients)
2) Harmony
3) Fermentation
4) Affection (stabilization)
5) Producing Natural Farming materials.
   fill up 2/3 of the jar with materials, and leave 1/3 of the space for that 3 vitality forces
   (water, air, and heat)
3. What to collect

(1) Plants with energy
(2) Fast-growing and vigorous plants
(3) Materials should be in season
(4) FPJ from the same crop
4. Characteristics of each material

- Snap the tender parts which contain the growing point.
- Pick parts wet with dew.
- The amount of extracted juice is slightly different depending on the seasons (spring>fall>summer).
- Avoid yellowish growth points.
- In general, mugwort produces little juice.

Mugwort (*Artemisiaprinceps*)
- FPJ is more effective when created from dropwort that are harvested from the winter to May.
- Spring is the best season for making dropwort FPJ.
- Cut dropwort in pieces of about 2in in length.
- Dropwort has plenty of juice, which accelerates the process of fermentation.
- Because dropwort produces a lot of juice, add more brown sugar when keeping dropwort FPJ in storage.
- Pick thick and short shoots.
- Cut shoots into small pieces without peeling off skin (Do peel off the skin, when it becomes brownish)
- Ferments fast due to the plentiful juice. (About 5 days)
- When bamboo shoots are soaked too long, white molds may occur due to the abnormally fast fermentation
- Pick about 5.9in–long vines which sprout newly in the spring.
- In the summer, collect the soft part of the vine and the light-colored leaves from the upper part of the vine.
- Ferments fast due to the plentiful juice. (About 5 days)
- When bamboo shoots are soaked too long, white molds may occur through the abnormally fast fermentation.

**Arrowroot or kudzu vine (Pueraria lobata)**
- Cedar is often used as windbreakers in ‘Jeju Island’ (translator’s note: the biggest island in Korea). A flow of sap oozes out from the tree in the end of June. This is the time optimal time for harvesting its fruits.

- Cedar has ‘chi’, so when a small amount of the FPJ made from the cedar is mixed with other FPJs, it will become a very effective reinforcing agent.

Fruit of the cedar (*Cryptomeria japonica*)
- Pick immature fruits of the chocolate vine in September. It is good to collect when the fruit is immature, because matured fruits only have a small amount of juice.

- Fruits from the chocolate vine entwining a lacquer tree (*Toxicodendron vernicifluum*) are even better.
Seaweeds

- Effective for a plant’s growth.
- Reinforces the color of fruit.
- Use a light stone weight to press down on brown seaweed (*Undaria pinnatifida*), because the juice of brown seaweed can be extracted faster than others.
Ripe fruits with no commercial value

- FPJ of ripe fruits is called fruit enzyme
- Divide a fruit into four parts (don’t use as a whole)
- It is good to use FPJ which has matured for 1 year. Apply this FPJ to the plant in its late reproductive period
Flower of the false acacia (black locust) (Robiniapseudo acacia)

- The best time for collecting flowers is when they begin to bloom, just before bees visit to pick honey.
- Use the same amount of brown sugar as the amount of flowers, because they have a lot of moisture.
- Flowers which smell strong are more effective.
‘Child liquid’

- Use thinned-out fruit (young fruit) and the auxiliary bud of general crops
5. When to collect materials

(1) Just before sunrise
(2) Quickly snap the growing points
(3) Special attention
6. How to make FPJ

- Local plants that grow fast especially in spring
- Plants that are cold tolerant
- Pick them up before dawn

- mugwort
- dropwort
- wheat
- clover
- bamboo shoot

- axillary buds of cucumber, squash, melon, watermelon and so on
6. How to make FPJ

- Do not wash the plants
- Make several kinds of FPJ with a single material. Mix them application is needed
- A stone makes the volume two third.
- It is completed in 5-7 days.
- The power is strongest in a couple of days after completion.
- Keep it in dark and cool place.

How to make it fermented

Mix the material with crude sugar

One third to half amount as materials

Crude sugar

One third to half amount as materials

Cover with a paper

Residue can be mixed with compost.

2/3
6. How to make FPJ

1. Gather the FPJ leaves
2. Wash the FPJ leaves
3. Crush the FPJ leaves
4. Boil the FPJ leaves
5. Blend the FPJ leaves
6. Dry the FPJ leaves
6. How to make FPJ

1. Prepare ingredient with dew on it
2. If the ingredient is an irregular size, cut it into about 2in size.
3. The ingredient with brown sugar in a 1:1 ratio (weight)
4. Fill the jar with enough brown sugar to cover the top
5. Fermentation process
6. After fermentation is completed, surely filtering it for preserve.
7. How to use FPJ

How to use

0.1–0.2% conc. FPJ is applied on leaf surface and into compost with IMO.

Phyllo sphere microbial activities will be accelerated.

Add crude sugar.

Good for human.
Thank you

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