
Fermented Plant Juice (FPJ; information from Cho Han Kyu's book Natural Farming)

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Fermented Plant Juice (FPJ) is another oft-used Natural Farming input. It can be made in the following way: Collect plants that have defenses against the cold and that grow well in the spring. Other good plants to use are ones that are fast-growing and vigorous (these contain very active growth hormones). Bamboo shoots can be used; collect them while small, and remove the soil but not the outer skin. Other good plants to use for FPJ are strawberry, kiwi or cucumber (use lateral buds of cucumber; it grows quickly, though it is not very tolerant of cold and disease). For cucumber, cut "50 cm above...roots during last part of harvest season, then hang cucumber's stem upside down in a bottle." Juice will seep out. It is said to last for three years. Banana sprouts/shoots and morning glory (*Ipomea aquatica*) are also good ones to use.

Collect plants when they are in season, but make enough FPJ for use through the year. Often it works well to give FPJ made from a plant back to the same type of plant. Cho Han Kyu directs, "Give back to the plant what it has produced."

When collecting plants for making FPJ, avoid very hot sunshine (which might mean a low moisture level in plants, so that juice might not be extracted) and excessive rainfall (which will wash lactic acid bacteria and yeasts from leaves). Plants will have higher levels of useful plant microbes and hormones just before sunrise. Cho Han Kyu recommends that men get their wives involved, since women tend to be more careful while collecting! Quickly snap the growing points. Use the harvested material to make FPJ right away, so that the maximum amount of juice is available.

Notes on Materials. Container. Use a clay pot or wooden container made with Japanese cedar. Glass can be used, but the quality of the FPJ will be less. Glass containers should be shaded with dark cloth or paper to block the sun's rays. Avoid stainless steel, iron and plastics. The container should have a small opening, to limit air contact but also so that the liquid will rise above the ingredients.

Brown sugar. Use 1/3 to . the weight of the original ingredients (use the larger amount if the ingredient has high moisture content). Using refined white sugar will result in lower quality FPJ. Crude sugar is best. Depending on price and availability, molasses or other types of sugar are used in Thailand and other locations in Asia. Some sea salt can also be added, but should be kept to less than 1/3 the amount of sugar.

Use a weight on top of the jar (such as a stone) to extract air. Cover the lid, for example with porous paper. Write the date and ingredient on the lid.

Making FPJ. Collect ingredients. Shake off dirt and cut in 5 to 10 cm pieces. Use only one kind of ingredient in one container. Weigh the ingredient and crude brown sugar (for 7 kg of leaves/shoots, add 3 kg sugar). Mix in a large bowl using hands. Cover with newspaper and leave for 1 or 2 hours. Then transfer to a clay pot. The pot should be filled . in order for the proper amount of air to react with ingredients. Place a weight on top of ingredients (e.g. a stone) and tie porous paper onto the jar. After one or two days, remove the weight and recover the jar. Put the jar in a cool, shaded place, undisturbed during fermentation. Leave it for 8 to 10 days.

To use, dilute FPJs with water to 1:800 or 1:1000. Use a stronger dilution rate in wet weather. As an example, 1 tablespoon of FPJ in 10 liters of water would be a 1:640 dilution.

Comments:

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