INFORMATION BULLETIN

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FOCUS ON NONI)

COLLEGE OF MICRONESIA-FSM YAP CAMPUS

AGRICULTURAL EXPERIMENT STATION

Whether you make noni juice for personal use or sale, strict quality control measures need to be followed in order to ensure the safety of the final product. Even if you pasteurize noni juice later, a microbial protection strategy needs to be followed from the point of harvest and post-harvest treatment to the stage of juice extraction. It is always good to follow a combination of Good Agricultural Practice (GAP), Good Hygiene Practice (GHP) and Good Manufacturing Practice (GMP) (see box be-

those who make their own noni juice:

Fruit selection: Timing of fruit harvesting is important. It is believed that when the fruit is ripe it has the highest level of nutrients possibly responsible for the therapeutic effect of noni. Do not use infected or fallen ripe fruit.

in the juicing area. Tools and containers should be gia, chronic viral infections etc. While noni is not a sterilized using hot water or disinfectants. Per- "cure" for any disease, when combined with proper diet

sonal hygiene is of utmost importance.

Noni Juice Production: Points to Consider NONI - HEALING MIRACLE FRUIT

The Noni plant has brought hope and helpful benefits to people for the past 2000 years. Its fruit contains an array of chemical compounds of therapeutic importance. Noni juice acts as a powerful catalyst with whatever nutrient you combine it with. It increases the power, availability, and effects of all other nutrients. It improves absorption, function and overall results.

Noni directly affects the body's cells. It has the ability to open up the cell pores, allowing more nutrients to be absorbed into the cells, and more waste material to be removed from weak or damaged cells. It increases cellu-There are certain tips which may be helpful for lar activity, nutritional intake, waste removal and overall cellular health. This is another reason why noni juice seems to help such a myriad of health complaints in all body types. It affects the body in a positive, nutritional way on a cellular level no matter what the health issue or complaint may be.

Noni juice also helps to strengthen and support the immune system. Numerous health problems are associated with decreased T-cell function, such as a weakened im-Hygiene: Strive for a clean, sterile environment mune system, rheumatoid arthritis, hepatitis, fibromyaland lifestyle changes, it has been found to help support the body's own ability to fight and overcome many seri-Contd. on Page 2 ous health problems.

The Concept of GAP

World agriculture in the twenty-first century is faced with three main challenges: I) to improve food security, rural livelihoods and income; 2) to satisfy the increasing and diversified demands for safe food and other products; and, 3) to conserve and protect natural resources. These challenges can be tackled in part through a Good Agricultural Practices (GAP) approach - a means to concretely contribute to environmental, economic and social sustainability of on-farm production resulting in safe and healthy food and non-food agricultural products.

defined globally, comprise a range of measures for agriculture which is sustainable, efficient and nonpolluting by taking a life cycle approach to environmental hygiene, hygienic production (water, manure, soil, agricultural chemicals, biological control, indoor facilities and personal hygiene); handling; storage; transport; cleaning; maintenance; and sanitation. Within this framework, specific guidance is available for minimizing microbial contamination of fruit and vegetable products.

Acid fruit juices below pH 4.6 were once deemed a minor health threat due to the high acid. Furthermore, Good Agricultural Practices as refrigeration temperatures (below

5°C) represented an additional hurdle to pathogen growth, until the discovery that Listeria monocytogenes, a pathogenic bacteria, can grow down to 2°C. When juice spoilage occur, it is usually a reflection of the indigenous microflora including yeast, mold and bacteria. Thus, for safety and economic reasons, fruit juices should be subjected to strict regulatory control. Safety must always take precedent and strict limits should follow on production, harvest, transportation, storage, manufacture, processing, labeling and distribution. These are incorporated into GAP, GHP, GMP and Hazard Analysis and Critical Control Point (HACCP) procedures.

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Hand washing and maintaining gen- chemicals into the juice during fermentaeral cleanliness are the most impor-tion. tant factors to remember when preparing noni juice.



Personal hygiene is of utmost importance in noni juice production

Oxygen: Avoid entry of air in the containers to prevent growth of yeasts and other fungi, which may lead to toxic byproducts such as alcohol.

Container: Use only food grade plastic containers for juice collection and storage to avoid release of undesirable

Juice color: Avoid green fruits for it creates a darker color and bitter taste for the juice. The minimum time required for a batch of noni juice to ferment completely is 8 weeks, depending on temperature.

Acidity: Fully fermented noni juice should have a pH of 3.5 or less. The higher the pH, the higher the probability of contamination

Filtering: Juice may be filtered using a sterilized strainer or cheesecloth.

Quality control: If juice appears cloudy, has an unusual or foul flavor, or has a high pH, it is likely contaminated and should be discarded (see pictures on the

Storage: Freshly-squeezed noni juice should be refrigerated. Aged, fermented noni juice can be stored at room temperature in a sealed container for 1-2

Also refer Nelson & Elevitch, 2006





Pure (above) and contaminated (below) fermented noni juice. Contact with air during fermentation process may lead to contamination

scopoletin and a host of other natural health enhancing compounds (at least 170) which make this nutritious wonder food too good to leave out of your diet if you want to help support your body's maximum health by eating a simple fruit.



Ref: Nelson, S.C. and C.R. Elevitch. 2006. Noni: The Complete Guide for Consumers and Growers. Permanent Agriculture Resources, Holualoa, Hawaii

Disclaimer: The information provided in this information sheet is meant for educational purpose only. For any medical conditions, always consult a qualified medical practitioner.

Published by: Agricultural Experiment Station, College of Micronesia-FSM, Yap Campus, P.O. Box 1226, Colonia, Yap, FM 96943. Tel: 350-5752; Fax: 350-2325; E-mail: muru@comfsm.fm



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> 17 Amino Acids (including the 9 required for optimum health out of main 20) Vitamins A, C, E, BI, B2, B6, B12, Niacin (B3), Biotin (B7), Pantothenic Acid (B5) Folic Acid (B9), Calcium, Iron, Phosphorus, Magnesium, Zinc, Copper, Chromium, Manganese, Molybdenum, Sodium, Potassium.

That's not even counting the glycosides, sterols, bioflavanoids, carotenoids,