



# Development Action Planning (DAP)

34th International Vegetable Training Course "Vegetables: From Seed to Table and Beyond" Module 2

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#### **IMPORTANT** module 2

#### **Good topice**

- Week 3 Human Nutrition and Health
- Weed 4 Vegetable Postharvest Technlogies

#### **New topice**

- Special measures to control the export of fruits and vegetables to Europe.
- New development of ASEAN Good Agricultural Practices for Fresh Fruit and Vegetables: ASEAN GAP



#### Perilla Production Technology and Processing Development for Good Quality

- The first activity, research and technology development and production of perilla oil seed roll before.
  - Varieties collection
  - Testing varieties in station
  - Offering a new variety to the cultivators
- Research activities at the second, processing and utilization of perilla oil seed.
  - The process of extracting oils from perilla seed the varieties.
  - Processing production perilla seed











# Steps in action plan development





Name of Science : Perilla frutescens (Linn.)

Family name: Lamiaceae the same as those in the Basil

Thyme

Other names: the beauty (even Hong Kong teaching); Vasai (London); Sesame Jiang (Laos)

# Introduction

- Perilla seed oil have a valuable nutrition as follows

Micro nutrition: Protein and omega- 3 6 9

Minerals: Calcium, Iron, Magnesium, Manganese Etc.

- -Perilla seed oil have abundant antioxidants control cholesterol levels
- -Perilla seed oil can be grown in various environment and can be adapted well.
- -The villagers of northern most cooking Perilla seed or mixed with sticky rice to be eaten instead of in a mortar stone. The people is called some of the kanga nu nar/ Chew sesame rice









# Valuable supplements Supplements, 500 mg / capsule contains.

Nick linoleic acid / omega- 3 (Linolenic Acid / Omega3) 312mg. 62.4% Linoleic acid c / Omega 6 (Linoleic Acid / Omega6) 79mg. 15.84% Oleic acid / Omega 9 (Oleic Acid / Omega9) 59mg. 11.14% Protein (Protein) 1.5mg. 0.3% Tocopherol (Vitamin E) 0.21mg. 0.7% cold pressed oil, produce from natural products 100%







## **Utilization of Perilla in Thailand**

























#### Problems of production Perilla seed in Thailand

- Lack of good varieties for consumption and processing.
   that can be suitable for each area.
- Low yield due to was destroyed by pesticides.
  - Resistance to pest diseases
- Poor quality such as Flavor, nutritional value
- Safety , toxicants contaminants



# **Objective**

- To develop the new Perilla varieties which will be suitable for each areas.
- To improve the new varieties in order to high yield, good flavor good safe for consumption.







#### The process of Perilla varieties breeding, Department of Agriculture's process consist

varieties collection

Hybridization and selection

**Testing varieties in station** 

**Compare preliminary varieties** 

Testing varieties in farmer fields

Offering a new variety to the cultivators

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#### **Varieties collection**

- 1. Survey Perilla varieties grown in different areas
- 2. The species planted in plots
- 3. Characterization recorded by International Plant Genetic Resources Institute (IPGRI).
- 4. Classified Characterization

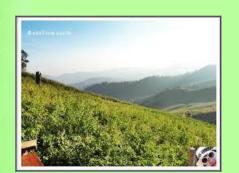








Nan Agricultural Research and Development Center has collected 10 Perilla species from both domestic and foreign country. Those Perilla were recorded characteristics follows









#### Hybridization and selection

- 1. Select varieties collected in order to convert a breeder.
- 2. Breeding
- 3. Grow F1 plant
- 4. Select good characteristics.













### Hybridization and selection

#### Selected criteria

- 1. Yield over 200 kg / ha.
- 2. Good quality for consumers.
- 3. good growth and good adaptation in environments.





The process of extracting oils from perilla seed the varieties. Processing production perilla seed

#### Quality of perilla

Physical characteristics

-taste texture

Chemical properties

- rancidity

**Nutritional quality** 

- protein fat vitamins

Safety quality

# **Output**



- To provide the new varieties to grower.
- Processing production perilla seed oil.







