Background Information on the Sites of Field Study Tour

Dragon Fruit (Pitaya) in Vietnam

Dragon fruit or pitaya (*Hylocereus undatus*) is one of the biggest exported fruit in Vietnam. About 80-90% of production is for export markets that include China, Thailand, Indonesia Japan, South Korea, Europe, the United States, New Zealand and 30-plus other countries. The rest is for domestic markets that include processing. The total production in 2013 was about 617,500 t from cultivation area of about 28,700 ha. Dragon fruit can be harvested year-round through advanced crop management techniques. The main growing areas in the country are Binh Thuan (20,270 ha), Tien Giang (4,200 ha) and Long An (5,196 ha) Provinces. But there are small pockets of production from north to south in the country. Out of the total production area, 3,000 ha are cultivated with Red Flesh Dragon Fruit Long Dinh No. 1 that was developed by and recently released from SOFRI. The cultivation area of this variety is expanding. The cultivation area of this variety in Tien Giang Province is more than 1,000 ha and at Tan Phuoc District 151 ha.

Sapodilla in Vietnam

Sapodilla (*Manilkara zapota*) in Vietnam is mainly grown in Chau Thanh District of Tien Giang Province with total area around 1,600 ha. Six communes of Phu Phong, Kim Son, Song Thuan, Vinh Kim, Ban Long and Dong Hoa in Chau Thanh District has 850 ha of cultivation area engaging 3,000 farmers. Other growing areas include Cai Rang and Binh Thuy Districts, Can Tho City and other provinces with smaller pockets. Sapodilla tree crown is wide. And sapodilla in Vietnam bear fruit year-round but concentrate in December to June. Average yield is 20-40 t/ha from seven-year old tree, fruit weight is 300-400 g, and fruit flesh is smooth with good flavour This fruit is mainly consumed locally. Recently, however, a small amount has been partially processed and canned for export markets.

Dragon Fruit at Cat Tuong Farm

- Person-in-charge: Mr. Doan Van Sang (hand phone: 0912931413)
- Location: 100 23.775' N; 1060 16.940' E
- Elevation: 9 m ASL
- Address: Hamlet No. 1, Thanh Tan commune, Tan Phuoc District, Tien Giang Province
- Total area: 75,000 m2 with three-year old trees
- Soil: Clay acidity sulfate soil, pH range 3-4 during dry season and 4.5-5.5 during rainy season
- Source of planting materials: Red Flesh Dragon Fruit Long Dinh No.1 of SOFRI
- Human resources: four regular staff for management and 200 seasonal labor staff depending on need
- Fertilization: organic manures include chicken dung, coconut peat, rice straw has been applied two times a year at 5 kg/tree/each application; chemical fertilizers include DAP and NPK at 100g/post/time for 4 times/season
- Harvesting: manually at 28-30 days after fruit setting
- Average yield: 30 t/ha/year
- Constraints: 1) pests and diseases such as fruit soft rot, anthracnose, beetle, etc.; and 2) only for local markets
- In-put costs: 15-20% of total income (18,000-20,000 VND/kg) during main season; 20 - 30% of total income (30,000 VND/kg) during off season
- Total income per farm: 5.2 billion VND/year
Sapodilla Farm at Kimson Commune

- **Person-in-Charge:** Mr. Vo Dong Lap (hand phone: 0969722403)
- **Location:** 100 329598' N; 1060 246338' E
- **Address:** Hoi Hamlet, Kimson Commune, Chau Thanh District, Tien Giang Province
- **Total area:** 20,000 m² with 500 trees (20 yrs: 150; 10 yrs: 200 and 8 yrs: 150)
- **Soil:** Clay soil with pH ranging from 5.0 to 6.5
- **Source of planting materials:** variety Long Mut by air layering in the farm
- **Human resources:** two home labors (father and son), and hired 4-6 part-time staff for harvesting
- **Fertilization:** 1-2 kg organic fertilizer and 750 g to 1,000 g NPK/tree/month
- **Harvesting:** manually from September to March
- **Average yield:** 250-300 kg/tree of 10 to 15 years old
- **Constraints:** 1) pests and diseases such as caterpillar, fruit fly, fruit borer and wax mealy bug; and 2) only for local markets
- **Returns:** high price from September to October at 20,000 VND/kg, other times price variation depending on other crops' harvesting seasons