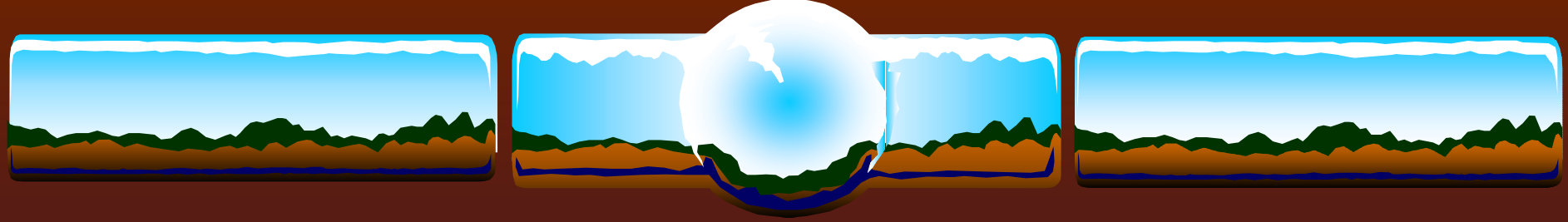
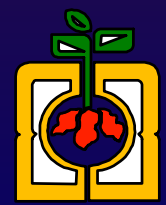


Cassava in the Philippines

Algerico M. Mariscal and Jose L. Bacusmo

Introduction

- Cassava is one of important source of food, feed and starch among Filipinos
- Known to perform well even under unfavorable growing condition such as drought and poor soils
- Though less government support, cassava contributes around 2% of gross value added in agriculture
- This crop is endowed with especial capacity to contribute to the development of food security and poverty alleviation in the country



Production Trends of Cassava

Table 1. Area, yield and production of cassava in Asia, 1999

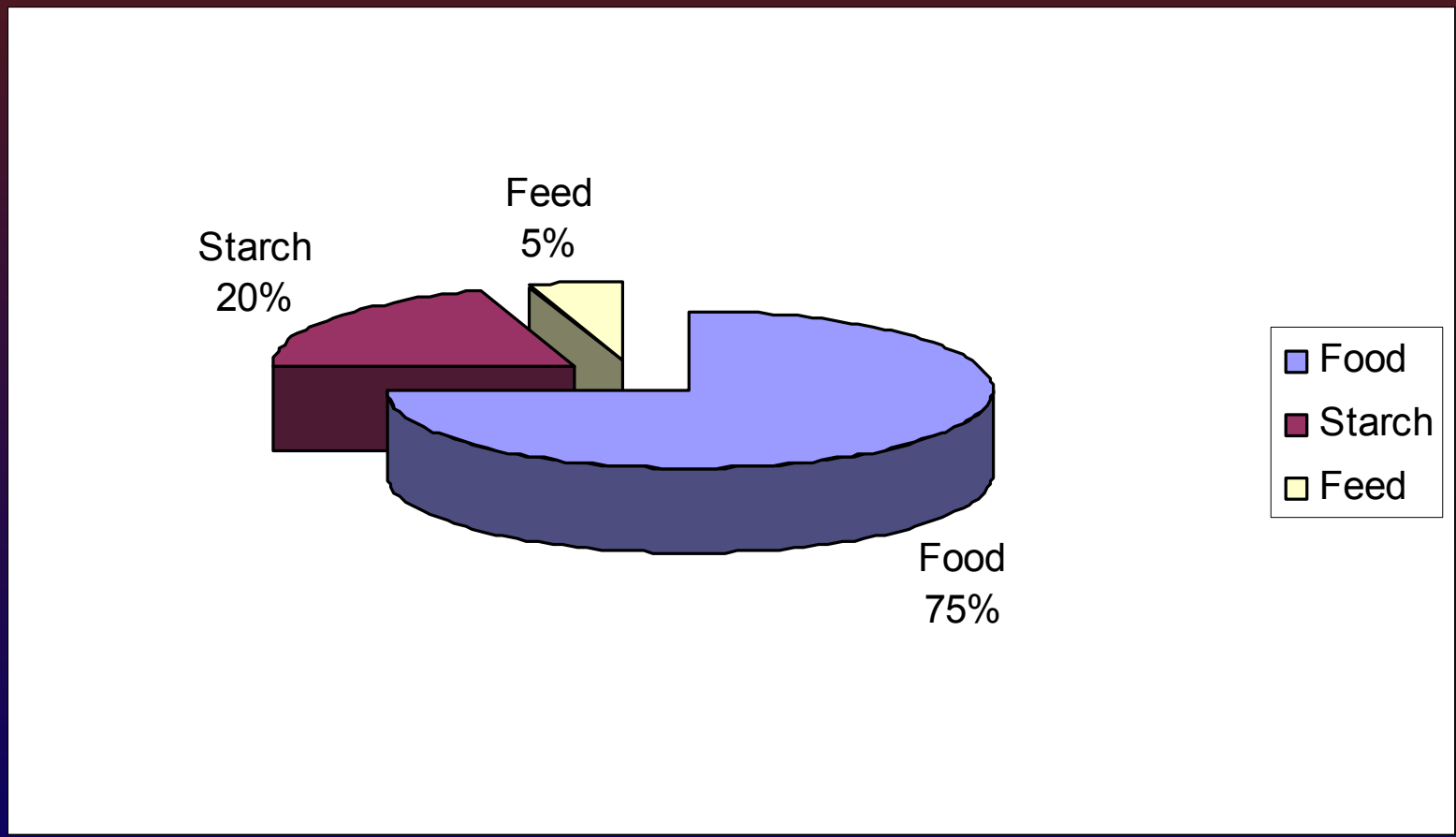
Country	Area (ha)	Yield (t/ha)	Production (tons)
ASIA	**3,366,398**	**13.6**	**45,767,700**
Thailand	**1,150,000**	**14.7**	**16,930,000**
Vietnam	**231,700**	**7.7**	**1,783,400**
China	**230,065**	**15.9**	**3,650,903**
India	**250,000**	**21.0**	**6,000,000**
Indonesia	**1,205,330**	**12.2**	**14,728,292**
Philippines	**210,000**	**8.5**	**1,786,710**

Table 2. Projected growth rates in production of cassava (average annual percent) in Asia

Category	1983-96	1993-2020A	1993-2020B
Area	1.37	0.73	0.94
Yield	0.46	1.00	1.00
Production	1.83	1.74	1.95

A Baseline scenario
B High growth scenario

Cassava Utilization in the Philippines

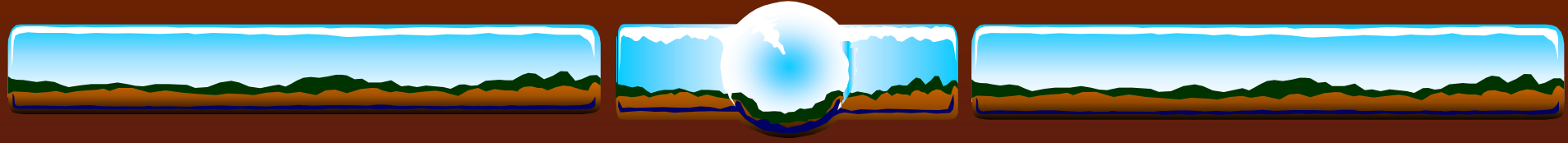


Cassava for Food

- Consumption of cassava is highest in Sulu Archipelago and Muslim population in Lanao
- New food product from cassava provide additional demand
- Leaves of cassava are also widely used as vegetable in Southern part of Mindanao
- Some islands in the Visayas and Mindanao with narrow coastal plains largely subsist on cassava

Table 3. Projected per capita supply and consumption of root and tuber crops in the Philippines, 1990-2020

Crop	Per capita consumption 1990-1999	Projected per capita consumption 2000-2010	Projected per capita consumption 2011-2020	Income Elasticity
Sweetpotato	8.97	7.82	10.40	0.56
Cassava	6.99	7.06	9.36	0.66
Irish potato	0.88	0.78	1.03	0.56
Root and tubers	23.58	21.39	28.25	0.58



Cassava for Feeds

- Around 190,000 metric tons of cassava each year are utilized as feeds
- No less than 30,000 metric tons of dried cassava chips are traded annually for domestic commercial feed formulation
- Major commercial feed brand in the country are now using cassava meal.
- Volume utilized for feeds increased steadily in the past 5 years due to chronic shortage of domestic corn-the traditional source of energy in formulated feed.

Table 4. Projected per capita consumption of meat in the Philippines (kg/year)

Source	2001-2010	2011-2020
Beef	3.63	5.82
Pork	13.81	17.18
Poultry	6.08	7.26

Cassava for Starch Industry

- Starch mills are operating between 10-25% of their capacity
- Starch price and supply of raw materials are highly unstable
- Tariff on imported cassava starch is lower than that of other cassava producing countries in Asia
- Since 1978 seven of ten mills have ceased operation

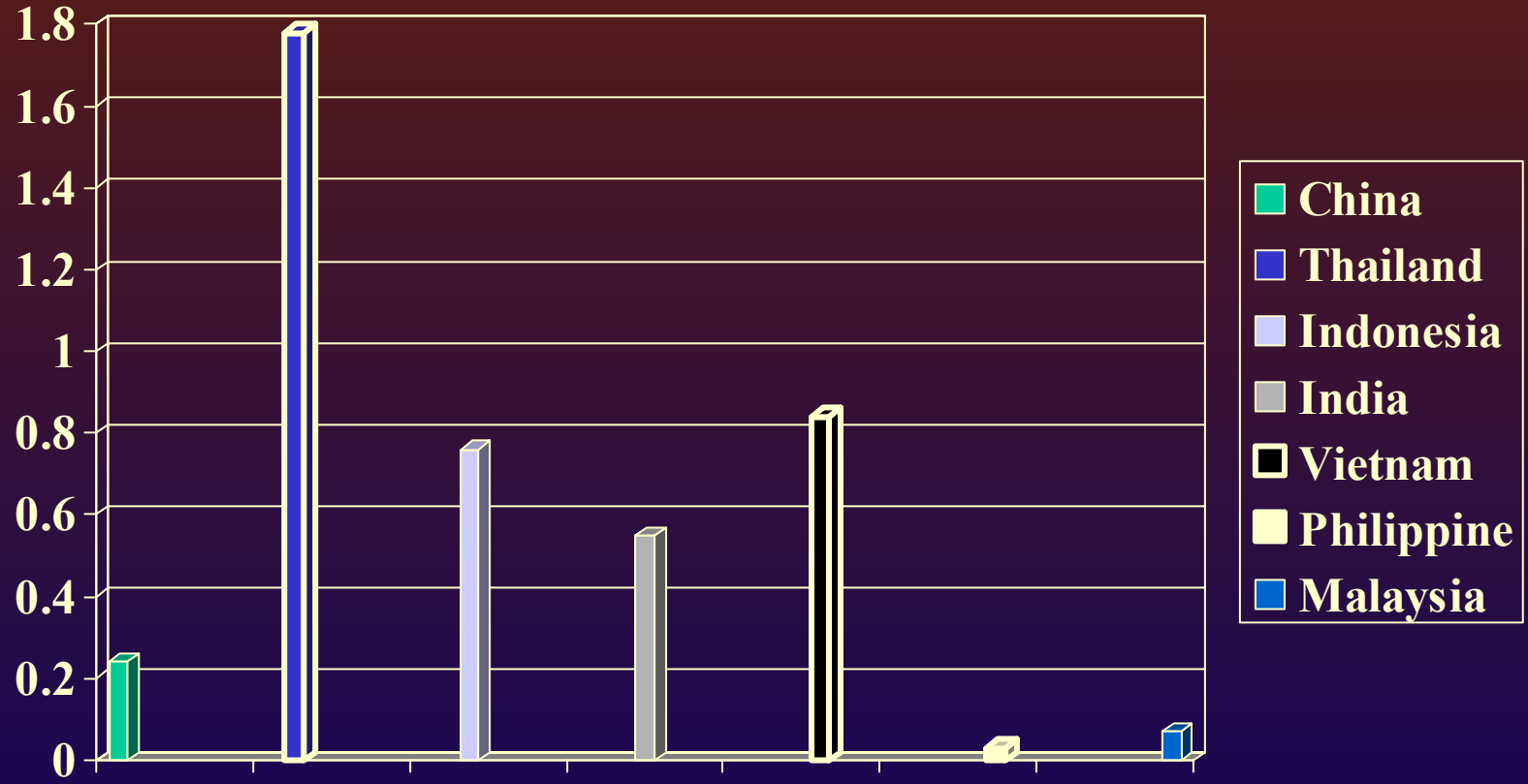


Fig. 1. Cassava starch production in 1994 (MT)

Table 5. Tariff rates, import volume and production of cassava starch in the Philippines, 1993-1999.

Year	Rate of duty (%)	Import vol (50kg bags)	Domestic production(bag)
1993	40	2,470	978,802
1994	35	370	916,445
1995	30	15,102	606,950
1996	25	16,834	574,292
1997	20		437,500
1998	20		409,868
1999	15	520,000	1,232,500

Growth Projection of Cassava

- La Tondena Distillers Incorporated has turned into cassava as alternative raw materials for alcohol.
- This private company is targetting 30,000 hectares of cassava for alcohol.
- Demand of cassava for feed depends on the relative prices and supply of corn.
- It is projected that from 1993-2020 use of cassava for feeds in developing countries will increase annually.
- Use of cassava in the manufacture of starch is projected to grow if the economy improves.

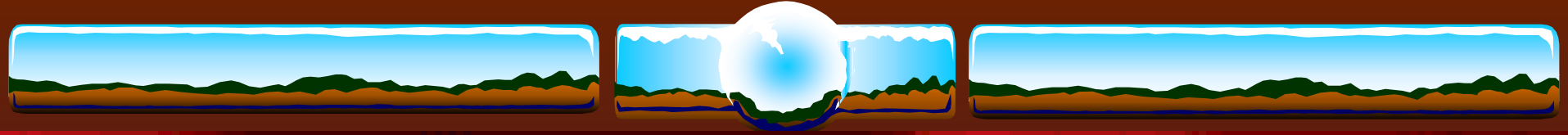
Table 6. Projected growth rate in domestic use of cassava (average annual percent) in developing countries.

Category	1983-1996	1993-2020A	1993-2020B
Food demand	2.10	1.99	2.24
Feed demand	1.66	1.62	1.72
Total use	2.49	1.93	2.15

A – Baseline Scenario
B – High Growth Scenario

Conclusion

- Cassava in the Philippines play an important role in food security, equity and poverty alleviation.
- Demand of cassava for food is expected to increase with increase in population.
- Local cassava starch production is expected to decrease though actual domestic use may increase unless uneven tariff is addressed.
- Use of cassava for feeds will be the main sector of growth for the local cassava industry.
- Intervention of private sector in the use of cassava is very important in creating demand.



Thank you very much