

Protected Agriculture

Present status and future trends

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Present status

- Sri Lanka has experience only around 2 decades
- Primary level net houses are established for foliage, vegetable and fruit
- Import and supply business (China, Thailand, Israel, ect)
- Research activities are less
- As a rain shelter (specially B onion)
- Shade nets
- Insect proof nets
- Nursery houses

Nursery houses



Rain shelter



Protected agriculture in dry zone



Protected agriculture in dry zone



Protected agriculture in dry zone



Flowers

- ❑ Roses
- ❑ Gerbera
- ❑ Carnation
- ❑ Daisy
- ❑ Tulips
- ❑ Chrysanthemum

Vegetables and Fruits

- ❑ Bell Pepper
- ❑ Cucumber
- ❑ Broccoli
- ❑ Cauliflower
- ❑ Tomato

- ❑ Strawberry
- ❑ Cherry tomato

Basic differences in design

- Wet zone
 - ❑ As a rain shelter
 - ❑ Moisture control (reduction) for quality control in foliage (cut flower)
- Dry zone
 - ❑ As a rain shelter
 - ❑ Moisture control (mistlers and foggers)
 - ❑ Protect from Insects

Related problems and solutions

- ▶ Higher initial cost for installation
 - ❑ Subsidy schemes and low interest rate loans
 - ❑ Increase the competitiveness in the market
 - ❑ Frame fabricate locally and only the polythene/net is import
- ▶ Higher temperature in Dry zone protected houses
 - ❑ Special design of structure for dry zone
 - ❑ Exhaust fan installation to remove excess heat (cost factor)
- ▶ No fix price for agriculture produce, hence low profit
 - ❑ Introduction of new customers (star grade hotels, super markets, export and air lines)
 - ❑ Formation of producer groups
 - ❑ Buy back agreements
 - ❑ Higher farm gate price (no intermediate sellers)

Related problems and solutions

- ▶ Lack of knowledge on new technologies
 - ❑ Training and education programs
- ▶ Pest and diseases problems
 - ❑ High quality polythene and nets (cost factor act adversely)
 - ❑ Good agricultural practices

Future trends

- ▶ Protected hoses with advance technology
 - Misters and foggers
 - Exhaust fans
 - Semi automated structures
 - Smart net houses
- ▶ Crop diversification
- ▶ Demonstration of high tech tunnels in government institutes

Research Interest

- ▶ Protected houses with advance technology
 - Smart protected houses