NEPALESE PRACTICE AND RESEARCH NEED IN PROTECTED AGRICULTURE

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Nepal at a glance

- Total land area – 147,181 sq. km, Only 0.1% of total land mass of earth
- 77 districts, 263 Municipalities, 3157 VDCs
- Population 28.98 millions, 10 religions
- 125 caste/ethnic groups, 123 languages spoken as mother tongue
- Predominantly an agrarian country
- 25.2% people still below poverty line as of 2010
- Agriculture contributes 29.37% to GDP, 66% employment
- 21% of the land is cultivable (47% rain-fed)
- Average land holding – 0.68 ha
- Major crops Paddy, Maize, Wheat and Horticulture
- Livestock: Cattles, Buffaloes, Sheep/Goat, Pigs and Poultry
1. Mulching:

- **Traditional mulching**: Mulching material crop residue / steam and leaf of trees.
  
  *Common Crop*: Potato Planting with Mustard straw

- **Plastic mulching**: Plastic sheet with drip irrigation
  
  *Common Crop*: Tomato, pumpkin, Banana, Cucumber

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**Straw mulching**

**Plastic mulching**
2. Tunnel:
- **Straw Tunnel**: Rice and Wheat straw and frame (local wood, bamboo)

*Common Crop*: Mushroom, Leafy vegetable, Tomato,
2. Tunnel:
✓ Plastic Tunnel: Plastic and frame (local wood, bamboo, iron pipe and pole)

Common Crop: leafy vegetable, Cauliflower Cabbage, Tomato, Capsicum
3. Shade House

✓ **Net shade**: Frame (bamboo, wood, GI pipe)

*Common Crop*: Nursery, Orchard and Flower
Net shade: Anti Hail Net for Apple Orchard
3. Shade House

✓ **Plastic shade**: Frame (bamboo, Wood GI pipe) & Plastic

*Common Crop*: Vegetable, Flower
4. Closed house:
Plastic house: local wood, Bamboo, GI Pipe
*Common Crop*: Vegetable and Cut flower
Protected Agricultural Practice

4. Closed house:
Glass House: Glass and frame (local wood, iron)
*Common Crop*: Research and Nursery.
5. Control Atmosphere House:
Fan and Cooling Pad Green House: Wall (brick and glass/plastic), Frame (iron and wood), roof (glass/Plastic)

Common Crop: Flower, Tomato, capsicum, Nursery
Government Step on Protected Agriculture

Government of Nepal: subsidy of 25–100% on the following activity

- Mulching plastic with drip irrigation
- Plastic tunnel with mulching plastic and drip irrigation
- Net House with drip irrigation
- Plastic house with drip Irrigation
- Fan & pad green house & drip/ sprinkle
- Hydroponic system with sprinkle on closed house

The total budget under Ministry of Agricultural Development is more than USD 2 million.
Research Need

✓ Adoptive research of successful good practices from other country
✓ Effect of change in atmospheric within Control Atmosphere House on production and quality:
  ✓ Increasing/decreasing of Carbon dioxide and Oxygen level
✓ Pre and post Soil health
✓ Effect of Drip/Sprinkle Irrigation and Mister
✓ Effect of different color protective cover on production and quality
✓ Economic Analysis of different method of PA
Thank You