HYDROPONICS IN LEBANON

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WHAT IS HYDROPONICS?

- Hydroponics crop production is based on growing in soil less medias such as water, coconut fiber (Coir), gravel, or rockwool.
- Hydroponics fertilizers are dissolved in water to meet the exact nutrient requirements of each crop at the correct salinity and pH level.
- Grown under controlled environments in greenhouses.
GLOBAL HYDROPONICS PRODUCTION

percent

- Holland: 54%
- Spain: 22%
- Canada: 10%
- New Zealand: 3%
- United Kingdom: 2%
- Japan: 2%
- USA: 2%
- Italy: 3%
- Australia: 3%
WATER SUPPLIES

- Water shortages by 2025 could cut global crop yields by one one-third, or the equivalent of the entire grain crops of the US and India combined.

- The FAO has determined that, without changes in efficiency, the world will require as much as 60% more water for agriculture to feed the additional 2 billion people that are projected to be added to growing population of the world by 2030.”

  IRISH TIMES
  ECONOMIST
ADVANTAGES OF HYDROPONICS PRODUCTION

- High production in less area due to multiple vertical levels. It will result less climate control cost. (To chill 40000 plants/1000 sq.m is much more feasible as chilling just 7000 plants/1000 sq.m).
- Saving water consumption up to 80%; the system is close water circulation, so no any underground waste.
ADVANTAGES OF HYDROPONICS PRODUCTION

- The production is about 30% faster than traditional way; the plant has exactly everything needed all over the time (water, nutriment, climate...).
- Excellent produce quality. Everything is under control that’s cause less diseases and less pesticide usage.
- All year round production; the temperature, light hours and humidity are well controlled.
ADVANTAGES OF HYDROPONICS PRODUCTION

- Saving labor cost; no need for plowing, harvesting and replantation are very easy to manipulate.
- Long shelf life in the market; crops can be harvested with roots that protect them from wilting.
- Produce premium packing; crops can be harvested with roots, so it is very attracting for consumers.
SOIL vs. HYDROPONICS
SOIL vs. HYDROPONICS

- Crop rotation not required
- Hydroponics reduces the harmful effects of contaminating pathogens found in typical soil based production
- Soil fumigants are not required
- Pesticides and fungicides are kept to a minimum
WHY HYDROPONICS IN LEBANON?

➢ Geographic Advantage
  ✓ Central to a number of lucrative markets
  ✓ Freight cost advantages over other exporters
  ✓ Extended shelf life due to close proximity to lucrative markets

➢ Agro-Climatic
  ✓ Year round crop production potential
  ✓ Mild weather year round
WHY HYDROPONICS IN LEBANON?

- High cost of land
- Rapidly dwindling water resources
- Lack of national food security
- Increasing labor and production costs
- Capacity to reduce imported produce
- Increased availability of non-seasonal produce items
- Increased incomes for small scale greenhouse producers
The obstacles that limit the expansion of hydroponic in Lebanon

- Growers lack of know-how
- Lack of professional hydroponic companies
- Lack of cooperation and organization that help to spread this technique
- Financial difficulty and concern