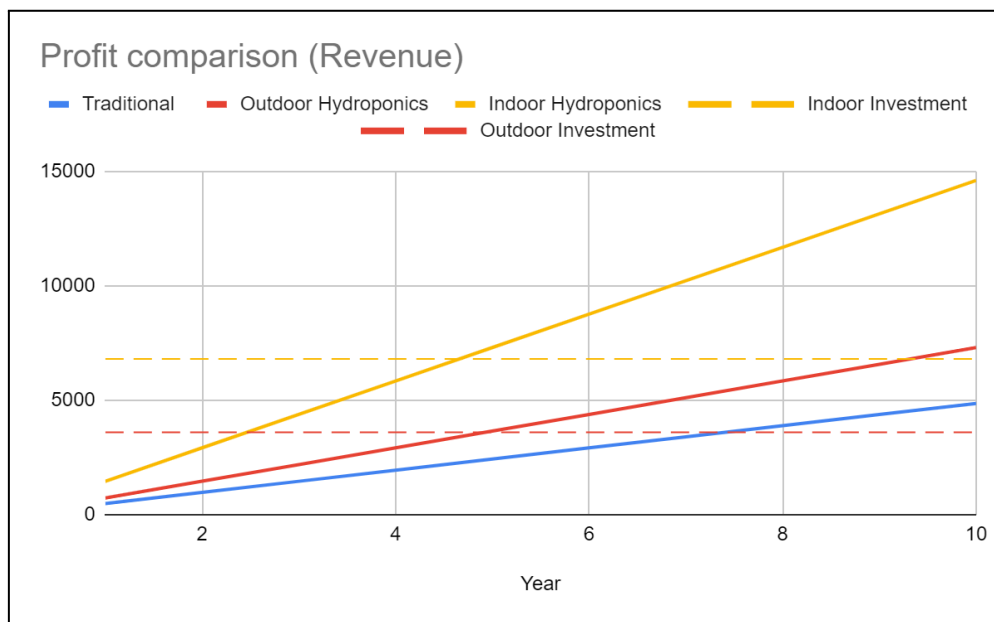


Why indoor hydroponics with LED lights rather than traditional farming?

Short answer: Because we can stack the system with LED lights and earn more profit after some years, **below are the approximate cost calculations.**

- Land size assumed in all comparisons: **2x1 feet**
- Research on: **Spinach**
- The average no. of days spinach can be cultivated in a year in traditional farming: **243**
(In traditional farming pests and heavy rain affect the production)
- Total number of days spinach can be cultivated in a year for hydroponics: **365**
- Initial Investment in outdoor hydroponics: **3600 Rs.** (Controlled Environment)
- Here, outdoor hydroponics is assumed to grow in the sunlight hence, we can't stack it.
- Initial investment in indoor hydroponics: **6800 Rs.** (2 stacks) (CE) (LED)
- One bunch of spinach can be harvested in an average of **15 days.** (250-300 grams)
- Assumed cost of 1 bunch of spinach: **30 Rs.**



- Calculated total revenue of traditional farming in the year: **486 Rs.**
- Calculated total revenue of outdoor hydroponics system in the year: **730 Rs.**
- Calculated total revenue of indoor farming system in the year: **1460 Rs.** (2 stacks)
- Years taken to be profitable in both hydroponics systems: **4.5+ Years.**
- The total calculated revenue in 2x1 feet 2 stacks indoor hydroponics farming in **10 years** is **14,600 Rs.** and for outdoor hydroponics is **7,300 Rs.**
- **Note:** Fertilizer cost is assumed to be the same in all methods. and the cost of pesticides in traditional farming is assumed to be the same as the electricity cost in hydroponics hence, they have not been taken into account.