



AMHPAC

ASOCIACIÓN MEXICANA DE HORTICULTURA PROTEGIDA



Protected Agriculture in Mexico

Oscar Woltman
February 12th, 2021

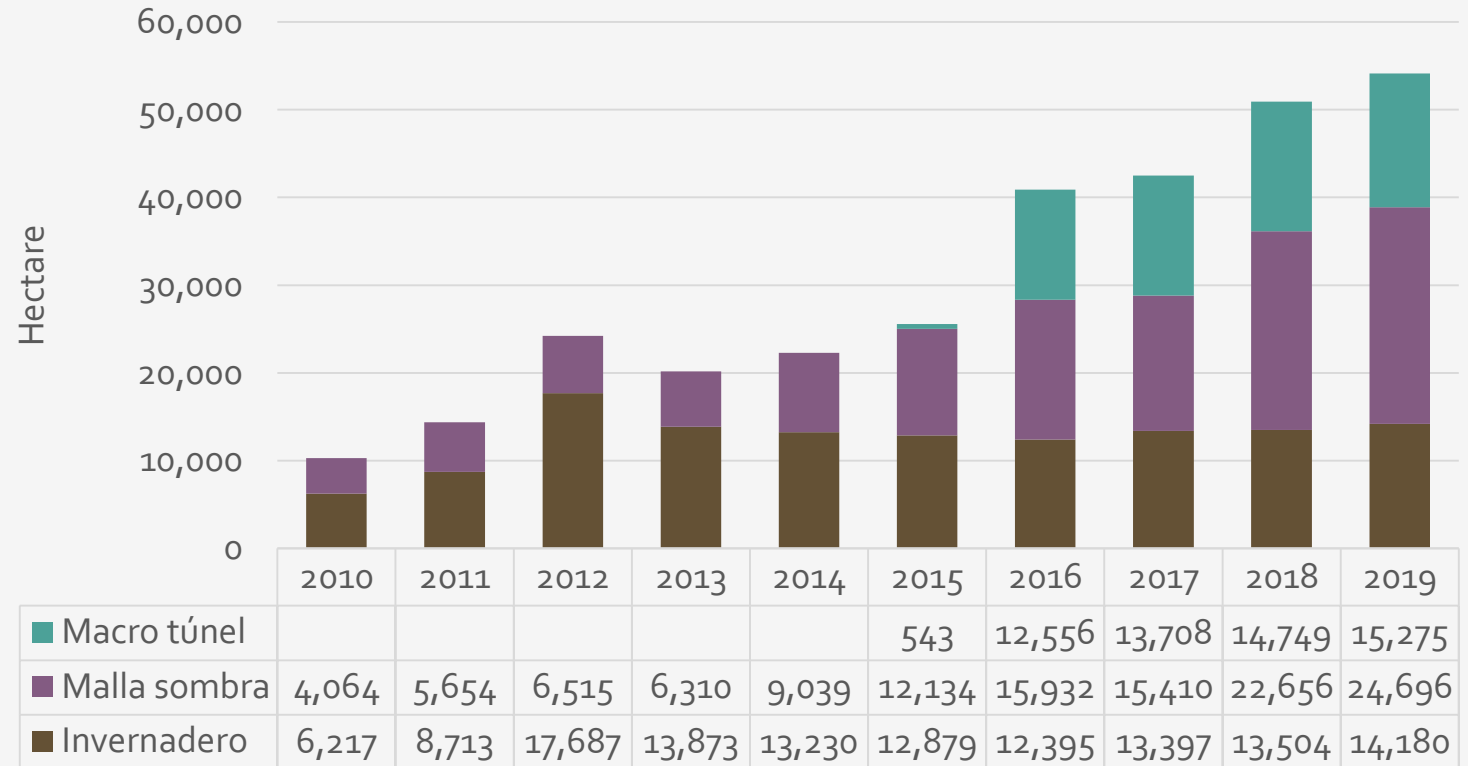
Ag Technology

Mexican ag-tech sector

Current landscape for doing business in Mexican Protected Agriculture

Protected Agricultural Area Sown in Mexico

SADER

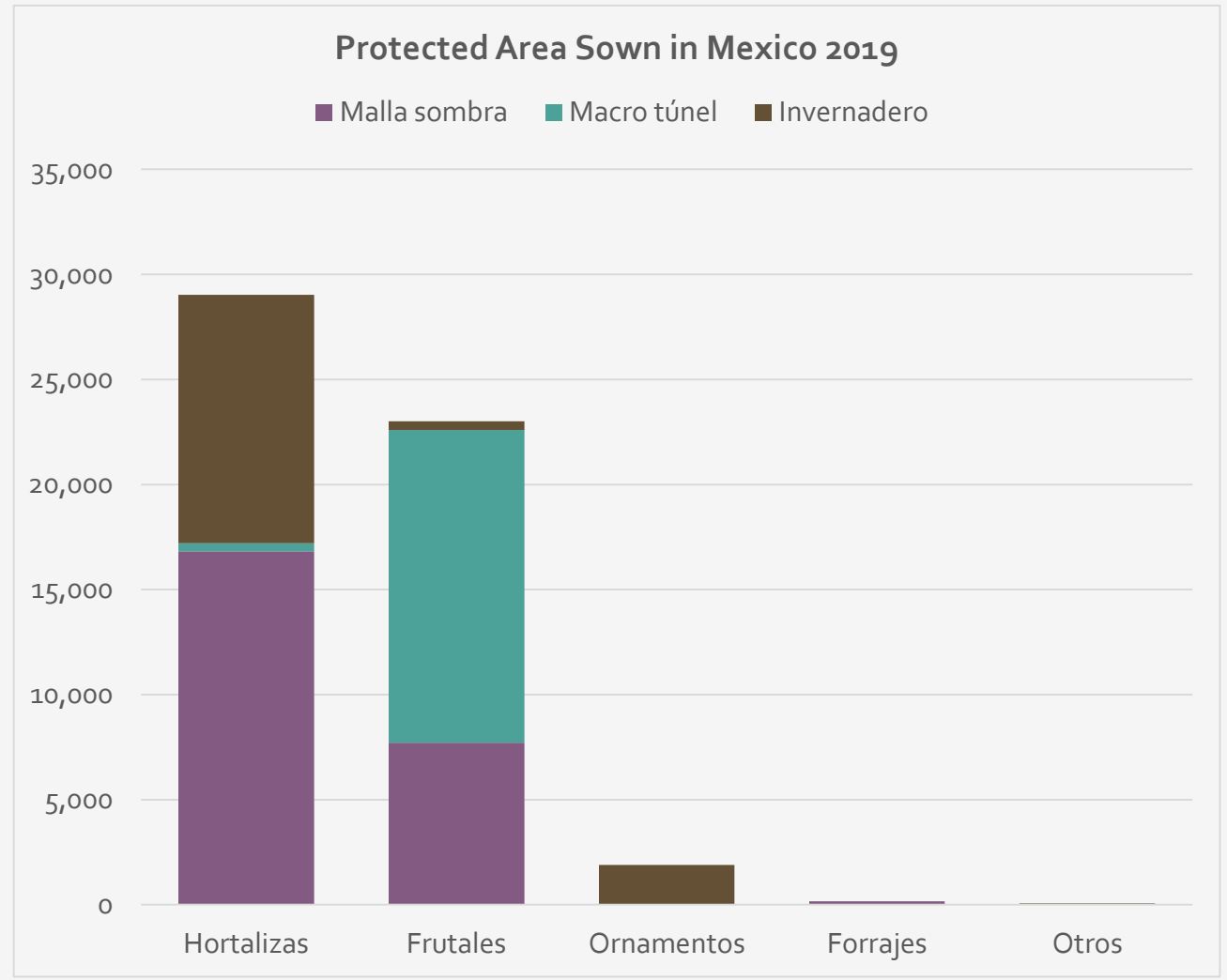


Growth - Mexico went from planting 50,909 hectares (ha) under protected schemes in 2018, to **54,150ha in 2019**.

- **Greenhouses** account for 26%
- **Shade houses** account for 46%
- **Macro tunnels** account for 28%

Fruits & Vegetables

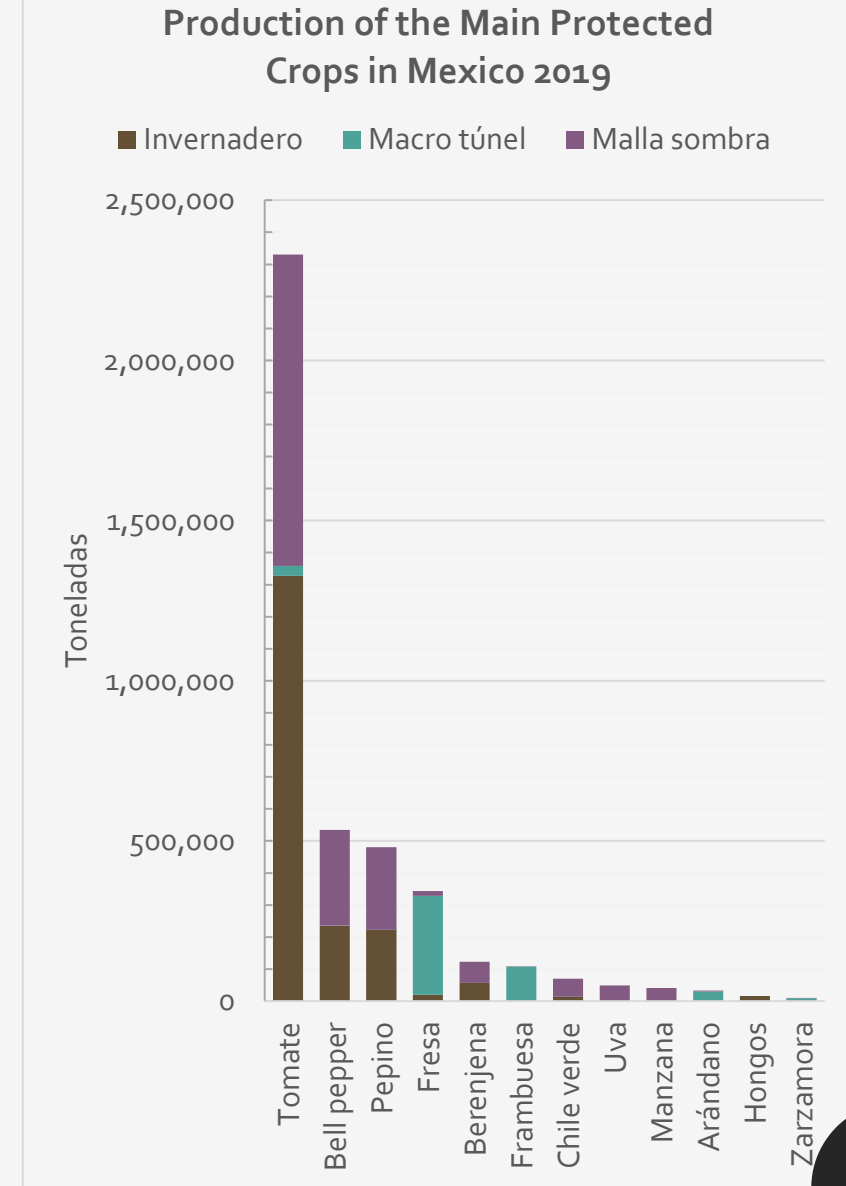
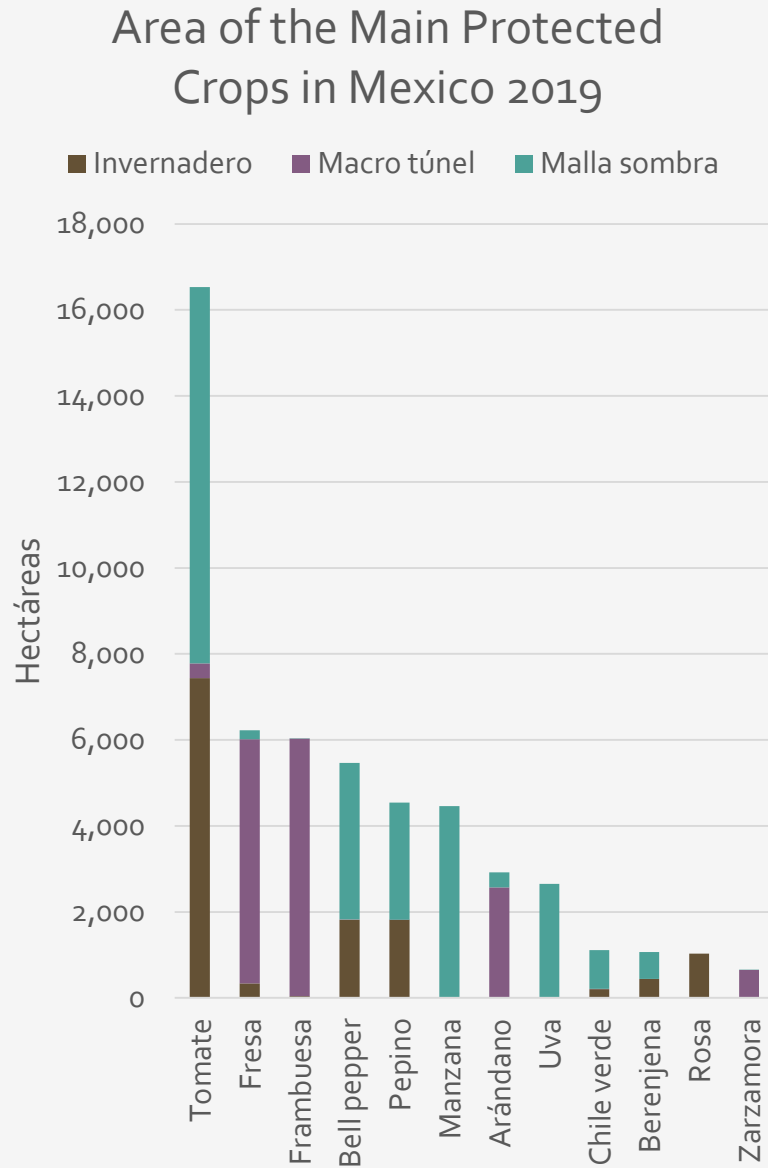
Tech custom tailored for each grower, region, climate & particular needs.



Vegetable protected production agglomerates 29,026ha of mostly shade houses and greenhouses. Fruits are almost entirely grown in Macro Tunnels (berries) and shade houses (apples).

Crops & Yields

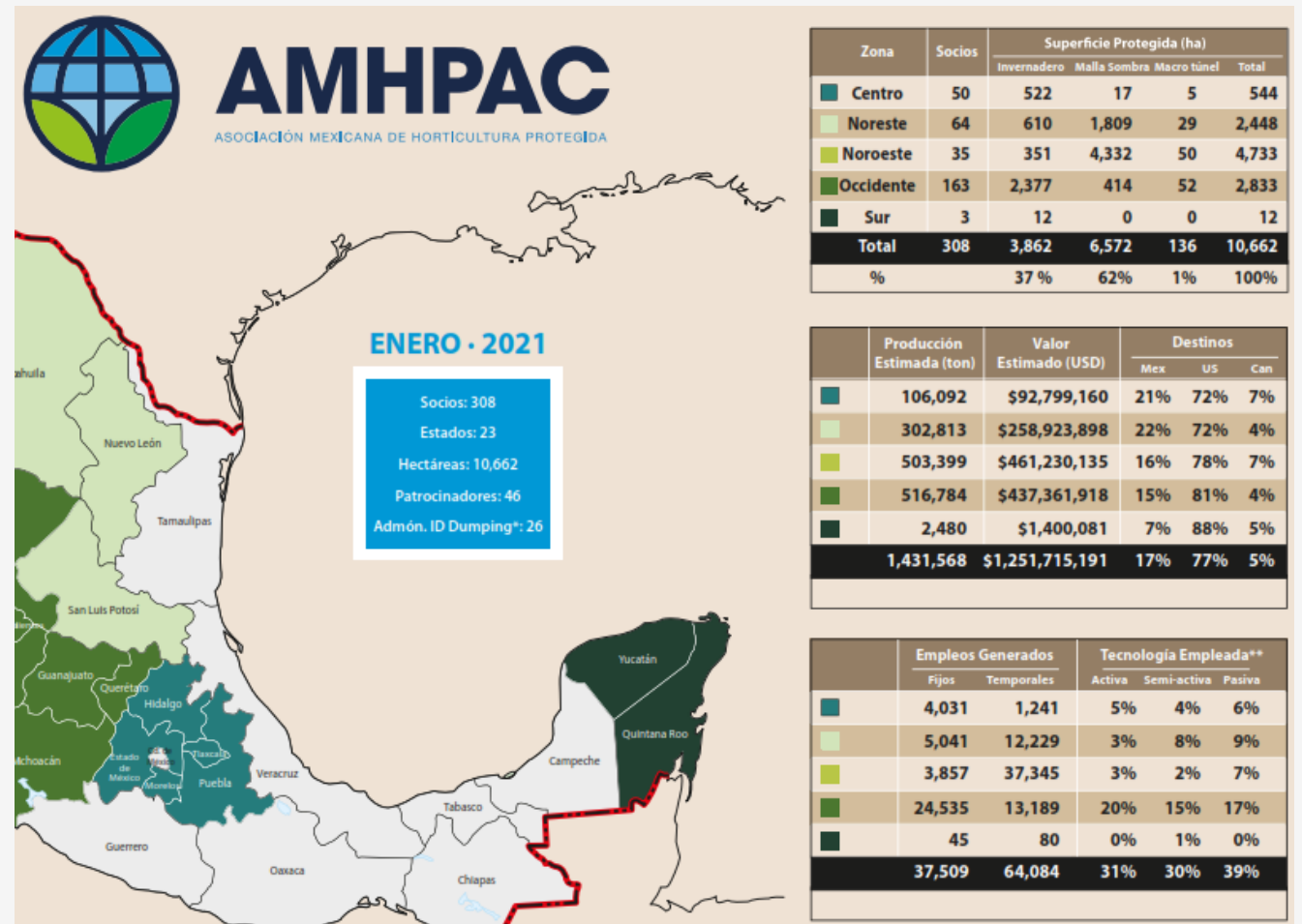
Tech, adjusted and applied to your local requirements, can and will make the difference in yields, cost and market penetration.



Tomatoes are by far the most popular crop, while bell peppers and cucumbers take 2nd and 3rd place in production. Berries as one group, will surpass tomatoes in area, but with lower yields.

An organized Industry

Mexican Association for Protected Horticulture (AMHPAC)



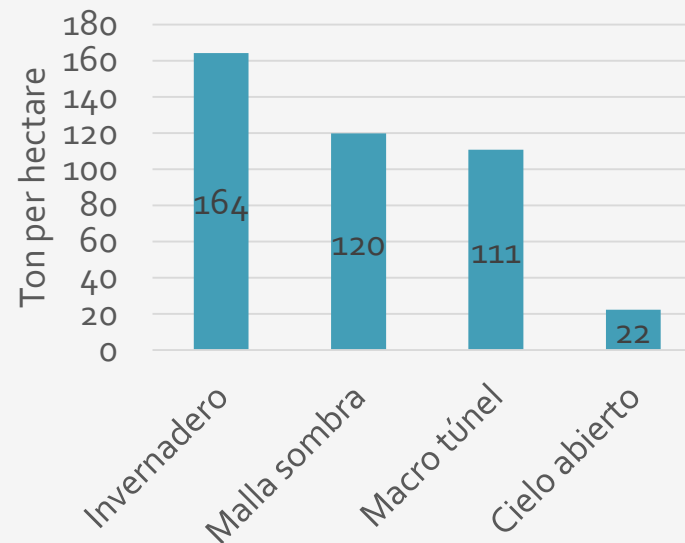
AMHPAC's members are found throughout the country. The regions in the north/west tend to have higher temperatures, lower tech and are more extensive. High tech operations are mainly found in the middle belt just north of Mexico City crossing the country from west to east. These are cooler climates, smaller operations, and intensive in yield and investment per hectare.



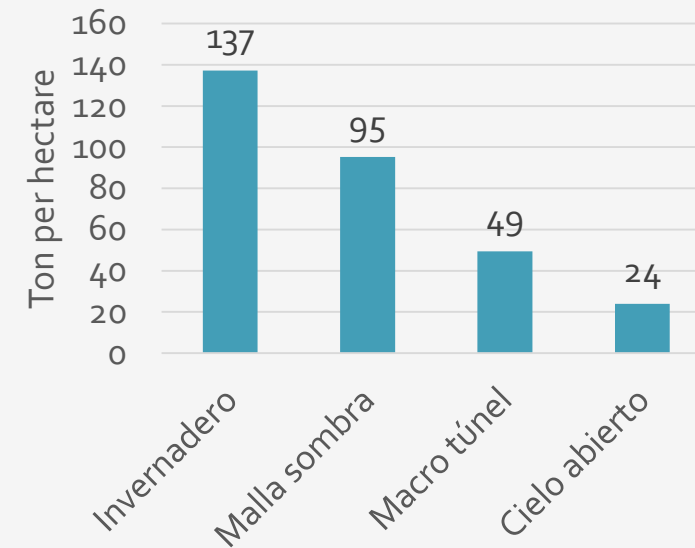
Opportunities for Ag-tech

Adapt to specific needs

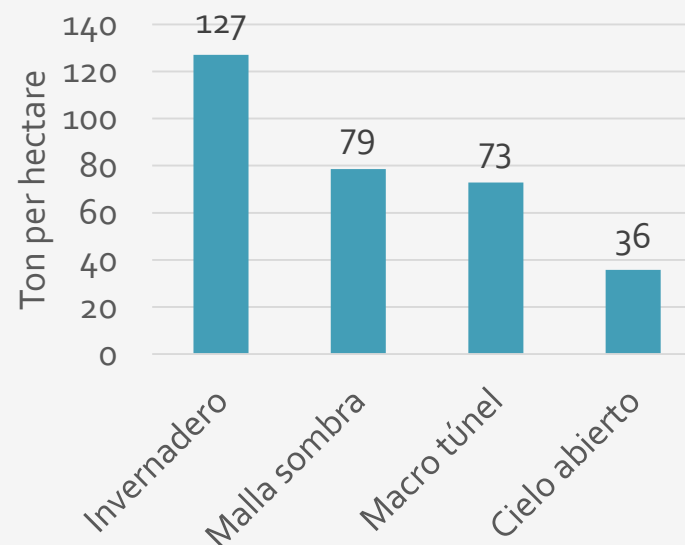
Average Yields in Tomato Production in Mexico 2019



Average Yields in Cucumber Production in Mexico 2019



Average Yields in Bell Pepper Production in Mexico 2019



Finding the right balance between costs and yields is paramount.

Opportunities arise for those companies that can adapt their tech to the set of different needs that Mexican growers have, compared to where the tech was developed.

Main technological needs

In Mexican Protected Horticulture

Yields in tomatoes may average 127 MT per ha, in the high-tech greenhouses yield above 600 MT are not uncommon. Same applies to bell pepper and cucumbers, where yields just below 300 MT can be reached compared to the averages mentioned of 127-137 MT/HA.

Technologies that are highly needed in Mexico:

- Forecasting – to improve sales and in time deliveries to the clients (something few realize).
- Imaging and plague prevention – to reduce time monitoring and reduce losses directly related to late plague detection.
- Liquid or fogging Co₂ systems – when we have warm climate the plants require higher levels of Co₂, but the heating system has a lower capacity due to less heat demand.

Main technological needs

In Mexican Protected Horticulture

Technologies that are highly needed in Mexico:

- Post harvest shelf-life extension – to assure correct delivery to client within quality specifications.
- Water saving – even though many disregard this aspect, the future of water consumption will be critical. Technologies and methodology to reduce water consumption per kilo of vegetable harvested would be very welcome.
- Labor reduction – also here we are seeing large needs. Minimum wage has almost doubled in 2.5 years from MXP 90 to MXP 160 per day for a farm worker. Still low but surely will double in next 3-4 years again. Better efficiency per manhour required in technology, training and labor conscience.

Target Market

How to offer ag-technologies in Mexico?

1. **Physical presence:** Having a physical address with an office or a warehouse creates trust or use a local dealer.
2. **Associations:** In an organized Industry, it is important to be a part-of, instead of just offering from afar.
3. **Marketing:** When Expos come back, visit or put up a stand in our annual Congress or seminars.
4. **Face to face:** Meeting and periodically visiting growers also creates trust.
5. **On-line:** Web page and Social Media that can be paired with easy access to people that can respond questions.
6. **Pricing:** Always remember to adapt to the specific needs, don't just push for the most expensive or state of the art.



Allies

Trusts, honesty and humility are of the outmost importance.

We know how to produce; we just need to adapt some details to the ongoing market demand, new technologies and rising cost realities.



AMHPAC

ASOCIACIÓN MEXICANA DE HORTICULTURA PROTEGIDA

AMHPAC is your gateway to:

- * Members
- * Clients
- * Seminars
- * Government
- * Fairs
- * Workshops

You need local support, join AMHPAC and make sure you have a professional and open Gateway to your new market.



Must knows

key factors or business practices that foreign companies must consider when doing business in the Mexican ag-tech sector

1. **Do not tell us what to do.** We know what to do as you can see in the annual growth of the industry. Tell us what is new, what can help us and what can save us money.
2. **Make a good cost presentation.** Do not just sell, assure that the client, **either the grower or the owner**, understand his or her financial benefit from the investment.
3. **Make friends.** But that applies more and more everywhere.
4. **Listen before you talk**, or you will not sell.
5. **Be willing to invest in trials.** Thereafter you can double charge.
6. **A local partner or dealer.** Do not worry you might lose margin with a local dealer, there are many aspects in Mexico a dealer will solve for you faster and better.
7. **Mexican HighTech AG is run by businessmen, not by growers.** You need to approach them differently.