

SEMIs
Seeds Business,
Critical Success Factors

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Fundamentals of Business Success

- Customer + Playing Field
- Quality (Product + Service)
- Cash
- Margin
- Growth
- Velocity

The Product (1)

- A seed is like “Life in a Capsule”
- The genetic potential of the entire plant is written in the seed itself
- A customer does not buy a seed based on its :
 - Looks (colour, size)
 - Smell
 - Feel or texture
 - Sound
 - Taste or flavour
- He buys it based on the “trust in the ‘promise’ the seeds company makes” and in the ‘hope’ of getting the “desired harvest”
- It takes a few months/full season to realize this.

The Product (2)

- Many things can go wrong till he harvests the crop but he almost always blames the seed
- Unlike other agricultural inputs, a seed company's liability is equal to the 'value of the crop and not the value of seed'
- A seed company has to provide, advice on all aspects of cultivation:
 - Land selection and preparation
 - Fertilizer application
 - Irrigation
 - Pest & disease control
 - Harvesting &
 - Post harvest technology
- Therefore the product we seeds-men sell is not seed but **“seed + trust + service.”**

Seed Production (1)

- A seed production cycle takes anywhere from 6-18 months.
- It must be done at a fixed place & time
- It is not possible to increase production by running a third shift or working on a holiday.
- One cannot be sure of the quantity one will get (unlike a manufactured product viz. pharmaceutical or pesticide).
- One either gets “too much” or “too little” and almost invariably what “one does not want”.
- And when one gets “too much” everybody else in the industry also “gets too much” and vice versa.
- Therefore, it is jokingly said that in seeds, “Nature is the Chief Production Manager”.

Seed Production (2)

Male and female must mature / nick at the same time



I am too old for it now!



Are you in the mood for it?

Seed Production (3)

- The main raw material is the Foundation seed or Parent seed.
- And the raw material for the Foundation seed is the Breeder's seed or grand-parent seed.
- Each takes an year / a full production cycle to produce
- Therefore, in the seed business, one must plan production at least three years/cycles ahead.
- Thus, you must sow in 2012 what you want to sell in 2013, before you have sold what you started to produce in 2011

Marketing : Place & Time (1)

- What one produces over 6 -18 months must be sold within 2 weeks
- That too at a fixed time & place
- The “Two week” window can shift by a few days depending on weather (temperature, rains)
- It is said that in seeds the product changes every 200 km.
- A different egg plant variety is eaten in India, depending on the region:
- In tomato:
 - Pink, sweet tomato in Japan for dessert,
 - Sour tomato in India for curry,
 - Beef tomato in the U.S. for a hamburger

Marketing : Place & Time (2)

U S Corn:

All farmers want high yield and good quality (colour, fill , uniformity etc etc). In addition they want:

Area

Corn Belt (Iowa, Indiana)

- High insect environment,
- Large farm sizes up to 10,000 acres

Wisconsin

- Dairy farmers
- Farm size 100-200 acres,

Minnesota, Dakotas

- Very Short spring and Autumn,

Eastern US

- Humid, hence bacterial, fungal, viral diseases

Addl. Characters required

Insect Resistance

Sweet Stalk
Minimum 16 leaves,
Stay green if possible.

Cold emergence
Quick dry down

Disease resistance/
tolerance

Marketing : Pricing

- Seed pricing is essentially “value pricing”.
- The price of seeds does not depend on its cost but on the value (often incremental value) perceived by the farmer, e.g.
 - TLCV Tomato in India
- In Japan, tomato seed price is US\$ 50,000/kg. and the cost production may be as low as \$ 250 / kg.
The cost is \$ 0.20/seed but revenue per plant is US\$ 25
- The price of GM seeds is also fixed based on value perceived by the farmer (as % of saving in pest control or weed control)
- The shortage and surplus also determine the seed price.
Price of Varalaxmi Cotton Seeds in India :
 - Year 1 INR 1200/kg
 - Year 2 INR 16/kg

Marketing : Promotion

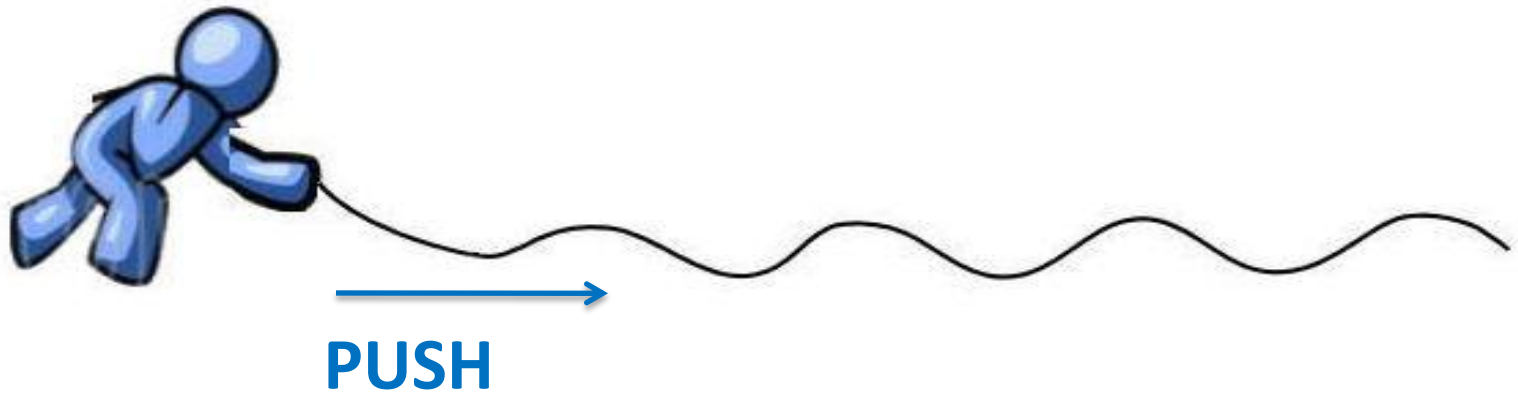
- The best publicity is by “word of mouth” i.e. “farmer to farmer”.
- Typically
 - A happy farmer tell five others
 - An unhappy farmer tells at least 20 others.
- Publicity on T.V., Newspapers, Print Media have limited impact especially for introduction of a new variety. It is useful to inform availability of a successful variety.
- We have used two very effective tools in our promotion
 - “Testimonials of farmers” with name, photo, address and his comments
 - Demonstrations.

Marketing : People

- The seeds sales & marketing people must develop expertise in all aspects of cultivation from land preparation to post harvest.
- The relationship between a seed sales person and farmer is like a “family doctor and patient”.
- The expertise narrows as the volumes grow bigger
 - Field crops or vegetable crops
 - Tomato or Pepper and so on
- It takes approx. five years to learn seeds business because “every year is different”
 - One season is too hot, the next too cold, third too wet and the fourth too dry. Then some times the season is very early and other times late. And when everything goes right, you have too much seed!

Marketing strategy (1): Push vs. Pull

It is advisable to use “pull strategy” i.e. to “create demand” than to use “push strategy” i.e. push supplies in the market.



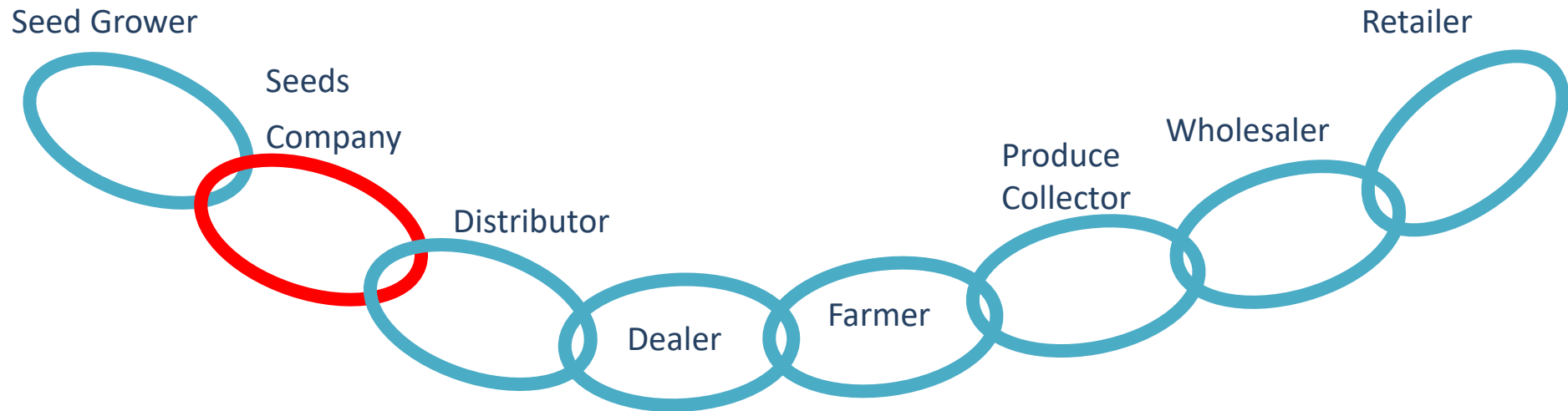
Marketing : Strategy (2)

- With a push strategy one always ends up with
 - A lower price
 - A higher discount
 - Longer credit and
 - Risks “bad debt”.
- If the demand is 100, then
 - It is better to sell 99
 - If you try to sell 101, you end up going to bad distributors/ dealers / paymasters.
 - You must ensure that everyone in the chain makes money.

Marketing strategy (3) : Strength of the chain

The Strength of a chain is in its weakest link

Each of the players must make a profit. If not, the chain will break



Research & Development (1)

- Before he begins to breed a new variety, a plant breeder must “choose a combination” that he desires to have in his new variety / hybrid from as many as 85 parameters:
 - Yield
 - Quality (size, weight, colour)
 - Maturity
 - Disease resistance, etc.
- Approximately 10,000 new crosses are required to be made to create a successful commercial variety
- The product life cycle involves several steps viz.

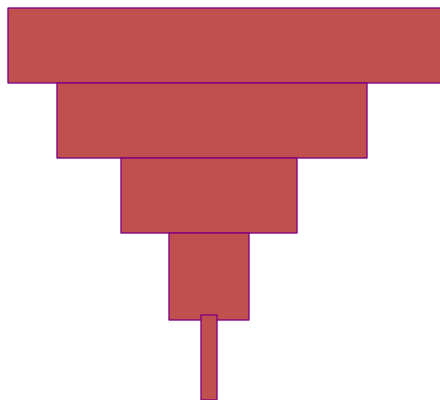


Research & Development (2)

With the development of modern tools such as marker assisted breeding and selection (MAB & MAS) it is now possible to do breeding more efficiently i.e. increase the number and reduce time.

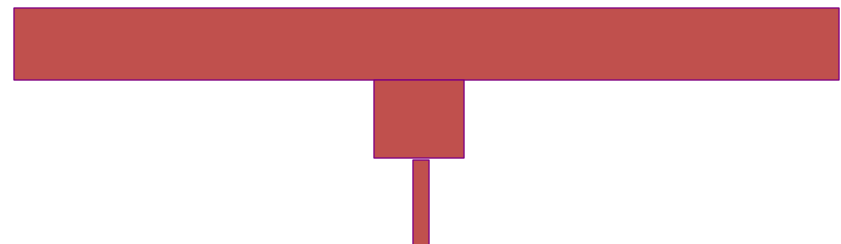
Traditional breeding

Limited number of crosses



With MAB/MAS

More number of crosses



Research & Development (3): Nature is capricious

Two obscure parents
can produce a
wonderful offspring



Research & Development (4)

The story about George Bernard Shaw and Isadora Duncan

Ms. Duncan: “I would like to marry you because the children I will bear will be as good-looking as me and as intelligent as you are”

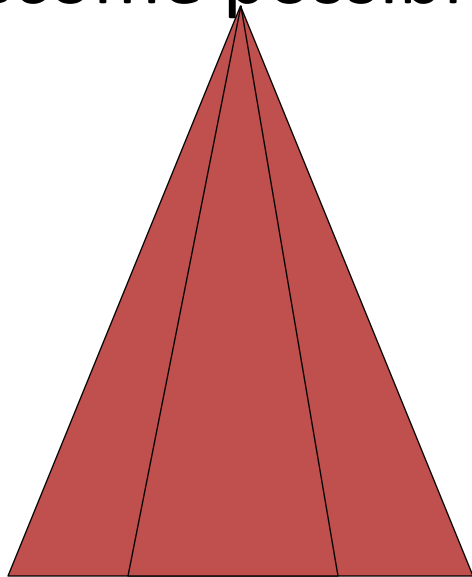


Mr. Shaw: “Well let’s not take the chance because they may turn out to be as ugly as I am and as stupid as you are”

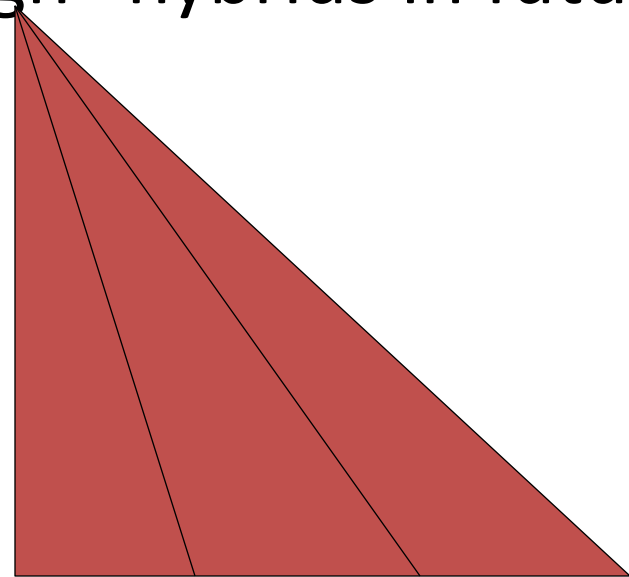
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Research & Development (5)

- With MAB, MAS & Genetic Engineering it will become possible to “design” hybrids in future



Attributes



Attributes

One will be able to incorporate the characteristics one wants, in a hybrid

Seeds: Critical Success Factors (1)

Defining Strategy & Implementation

- Build the business based on your core competencies
- Be patient. Build business step by step / gradually
- Build the business on “partnerships” – with seed growers, seed dealers, farmers and so on

Why is seeds business different

- Our product is “seed + hope or promise” which is realized after 4-6 months.
- Our liability is equal to value of the crop and not value of the product
- It takes years to build credibility but you can lose it one season or one instant

Seeds: Critical Success Factors (2)

Production:

- Always produce high quality and quantity of Breeder & Foundation seeds but
- Never, never produce more quantity of commercial seeds than what is required unless the seeds store well and are high value/low volume viz. tomato
- It is wiser to plough down plots at the earliest if you expect a bumper seed crop.

Seeds: Critical Success Factors (3)

Marketing

- Adopt pull strategy and not push strategy
- Do not sell what the market cannot absorb. The sales returns will invariably have to be written off.
- Watch out for bad debts: Please remember “sales is money in the pocket”.
- Focus on promotional tools which give maximum returns
- Always go for “high value high margin products”
- And in case of “me too products” if you are going to have to regret anyway, then better “sell and regret” rather than “keep & regret”.

Seeds: Critical Success Factors (4)

Finance

- Be careful when you borrow / minimise borrowing
 - It is easy to borrow money but difficult to pay later
 - Many companies create huge infrastructure because they get loans which they cannot repay and which can kill the companies later
- Please beware of “inventories” and “overheads”
- Historically, many seed companies have died because of
 - Overheads
 - Inventory write off on account of
 - Over production
 - Returns because of over or wrong supplies
 - Obsolescence

Lastly, three critical success factors (1)

1) Quality

Lastly, three critical success factors (2)

1) Quality

2) Quality

Lastly, three critical success factors (3)

- 1) Quality**
- 2) Quality**
- 3) Quality**

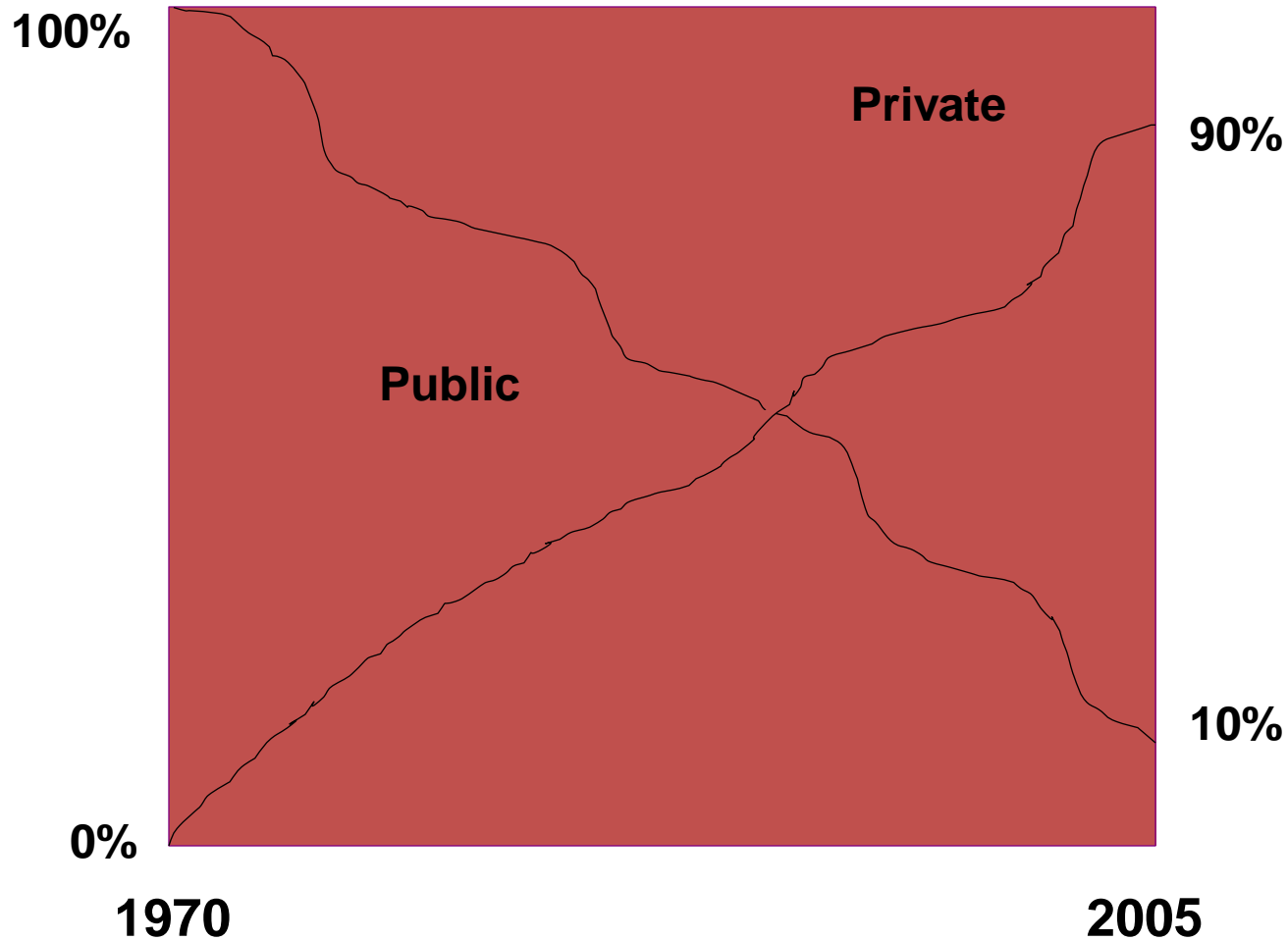
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Public vs. Private hybrids

- In India the seeds industry started in the late 1960s with the introduction of public hybrids, which were developed by Govt. Research Institutions and Universities
- The local private seed companies came up also in the late 1960s.
- They bought breeders' as well as foundation seeds from the Govt. institutions. Sometimes, they also produced foundation seeds.
- Next, they produced commercial seeds which were certified by the Govt.'s Seeds Certification Agencies
- The private seed companies marketed seeds under their own brands
- Gradually, the private companies set up their own research programmes and developed proprietary hybrids
- This was initially resisted by the scientists from the Govt. institutions but over the last 10-15 year period the principle has been well accepted.

India: Cotton Seeds

Share of public and proprietary cotton hybrids



China: Public vs. Private hybrids

- In China, until 15 years ago, the breeding, production of breeder, foundation and commercial seeds was exclusively in the hands of Govt. owned Academies of Agriculture Sciences
- The Chinese Govt. set up Govt. owned companies to run seed businesses and gradually transferred the business to these companies
- Next, the Govt. allowed Scientists from Govt. institutes to take ownership of these companies and also to set up their own companies
- Next, the law was amended to let foreign seed companies to take up to 49% stake in Chinese Seeds companies
- Today, most of the major Global players have their operations in China through minority owned seed companies (DuPont, Monsanto, Syngenta etc)