

# Natural seed resources and collection methods

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# Natural seed collection

- The seeds of cultivable crustaceans were originally collected from the natural wild waters as they are their breeding grounds.
- Most of the crustaceans have preferences for particular breeding ground or micro climate and environmental stimuli to complete their spawning.
- To perform the spawning they undertake migration also (spawning migration) and the obstruction in their migratory path affects their spawning drastically (E.g., [\*Macrobrachium malcolmsonii\*](#) and few other species of shrimps). These factors are known to affect the natural seed production and seed resources in natural waters.

- In general Indian estuaries, river mouths, coastal waters and marine ecosystems are known as rich sources for natural seed collection.
- A wide variety of species are known to inhabit and spawn in these waters and their seeds are available either in specified seasons or through the year (based on species).
- Usually estuaries are considered to be nursery grounds for the crustaceans due to their rich feed and varied ecological parameters.

# Qualities of natural wild seeds and hatchery produced seeds

<b>Sl.No</b>	<b>Natural /wild seeds</b>	<b>Hatchery produced seeds</b>
1.	Seeds collected from the natural wild waters are of different size and life stages	Hatchery produced seeds will be of same age and size in more or less same stage
2.	Naturally collected seeds will be from unknown parents	Seeds produced in the hatchery are from known parents
3.	Wild seeds will have a mixture of all species, both wanted and unwanted	Seeds from hatchery will be from single species and are of preferred species
4.	Wild seeds are not available throughout the year or they are available only during season	Hatchery can be operated even during non-season, provided the breeders are able to breed and seeds can be supplied even after the season

# Qualities of natural wild seeds and hatchery produced seeds

5.	Wild seeds are naturally bred and therefore their quality will be superior	In hatcheries, the spawning may be induced in many cases and therefore, there may be inferiority in qualities.
6.	Wild seeds are generally big in size as they will come to the collection spot only after a particular stage and they can be caught only when they are big.	Hatchery seeds are of small in size as they can be collected even at smaller size
7.	Wild seeds are less costlier than the hatchery seeds	Hatchery seeds will have a cost on their production and therefore they are priced higher
8.	Wild seeds are strong and healthier than the hatchery seeds in the sense that they would have passed through all challenging conditions in their life	Hatchery seeds are very weak in the sense that they are highly protected from any unfavourable conditions and they will have weak resistance to stress

# Qualities of natural wild seeds and hatchery produced seeds

9.	Wild seeds are difficult to acclimatize and they need a long protocol for acclimatization	Hatchery seeds can be easily acclimatized
10.	Wild seeds cannot be transported for long distance as they are not accustomed to artificial confinement	Hatchery seeds are from confined waters and therefore that can be transported to long distance for long duration
11.	Wild seeds may be carrying a lot of pathogens and non-pathogenic bacteria native to the collection ground	Hatchery seeds are relatively free from any microbes
12.	Wild seeds may have difficulty in getting accustomed to artificial feeds in the farms	Hatchery seeds readily accept the artificial feeds in the farming

13.	Seeds from the wild waters are limited in numbers and sometimes may not be sufficient for stocking	Hatchery can supply the required number of seeds based on the farm or pond size
14.	Collection of seeds from wild waters is labour intensive job	Hatchery needs less manpower per lakh seed production
15.	Genetic qualities of the seeds are unknown	Genetic qualities are well known