

## CHALLENGES OF ESTABLISHING PEARL FARMS

By William Reed

- **I'm not sure if I am the best person to speak on this matter** as I have made several dramatic mistakes in my almost fifty years in the pearling industry. The greatest example of this is when I founded a pearl farm in the Gambier Islands of French Polynesia using *Pinctada margaritifera* to produce black pearls. As this was about the first time in the world that black pearls had been produced I got cold feet and doubted that a world market could be developed for this product, so I sold the company - Tahiti Perles SARL – to the local entrepreneur, Robert Wan, before we came into production. The company has been extremely successful and is now probably the largest producer of Tahitian South Sea pearls in the world. The facts are that I was unable to see the potential and Robert was. It gives me great pleasure to see how successful he has been and I am so pleased that I made such a monumental error of judgement.
- **Probably the first thing to do before deciding whether or not to establish a pearl farm is to investigate the marketability of the product that you expect to produce.** A good method of doing this is to study what you may be competing against. There are two ways of looking at this: **a)** If you are aiming at a large production of pearls similar to ones that are grown elsewhere in the world, your price and quality must be competitive. Some potential investors look at prices in flash jewellery retailers and feel that they may be able to attain something like fifty percent of the retail price. **That is not so.** Pearls generally change hands at least three times and sometimes five times before they are eventually purchased by the end consumer and naturally each time they change hands there is a profit for that entity. The final retail price is likely to be somewhere between three and five times the farm-gate price. **b)** If one is looking at a small, vertically-integrated scheme where the grower can produce the pearls and transform them into jewellery, then retail the end product, there can be a much higher margin for the pearl farmer. This, however, requires a lot of different skills and delays in cash flow. It also requires considerable expenditure on manufacturing the jewellery, renting a suitable premises, doing advertising and promotions, employing specialists etc. It could be likened to farming wheat. The wheat farmer is never a sandwich maker and if he is a good farmer it is almost surely better to sell his wheat and let each link in the chain make a profit, while he concentrates on what he does best – growing more wheat!
- **So you have decided to establish a pearl farm.** The economics of pearl farming are not as attractive as they were a few years ago. Many people think of pearl farming as romantic -- just floating around in calm seas waiting while the myriads of little pearl oysters are busy working for you coating layer after layer over the beads which man has inserted into their gonads. Believe me, pearl farming requires a lot of blood, sweat and sometimes tears. Unless the investor has considerable experience in pearl farming, he or she should employ experienced

top management personnel and remunerate them appropriately. Such experienced staff are not easy to find. I have always found also that it is best to offer a significant bonus related to the nett profit of the company before tax to good senior staff. This also has the effect of keeping staff: if they know that there may be a bonus about equal to half or more of their annual salary, but a year or two later when the crops are harvested and sold, they are unlikely to quit their position. It takes some years for management to understand the area which they are farming so it can be very costly to lose senior and experienced personnel.

- **The location of the farm.** Many factors have to be taken into consideration in choosing a suitable location. It is an advantage to have an adequate supply of wild natural pearl oysters, but this is not absolutely essential now that hatchery technology and spat collection have been developed. In Tahiti the industry relies almost totally on the collection of spat (the post-larval stage of oysters). In Australia and Indonesia – and probably in some other places – the development of rearing pearl oysters in controlled hatcheries is generally proving successful although it is not yet totally reliable. It has the great advantage of allowing the selection of the parent animals or brood stock from oysters which may have the most desirable nacre colour, or that have proved to be the fastest growers. Several other factors should be taken into consideration. The water exchange or current flow and the fertility of the water can be measured by scientists, but the best empirical test is to place some live oysters in the area and observe their growth rate for about a year. The length and shape of the growing spines on the outer edge of pearl oysters is indicative of their health and the suitability of the site. It is ideal to have a very large area for a pearl farm so that the growing areas can be rotated every few years. It is also preferable to be well away from neighbouring pearl farms. Overcrowding or mismanagement of farms can result in the build-up of bacteria and subsequent oyster mortality which can be transmitted to nearby farms.
- **Access and security.** Access to the pearl farm site is important. This can be very costly if the farm is located a long way from a population site from where labour can be recruited. In Australia many farms are accessible only by large vessels or by float planes. Also it is often impracticable to build accommodation on land, so the workers are accommodated either on expensive floating barges or on seagoing vessels. All sewerage and waste materials are collected regularly from sullage tanks and taken to suitable disposal sites to avoid pollution of the pearl farming sites. Crew and workers are rotated at regular intervals. This remoteness sometimes has the advantage that there is less chance of unwanted ‘visitors’ stealing the pearls or vandalizing the farms. In areas where pearl farms have vehicle access or are sited near to population centres, the prospective investors should calculate the risk of theft and take adequate precautions. This can be very costly. One of the most suitable areas for pearl farming that I know of is at Dongonab Bay in the Sudanese Red Sea. This is where in the early 1900’s a certain Dr Crossland succeeded in collecting spat and growing the local species, *Pinctada margaritifera* var. *erythraensis*, to maturity. This species would be capable of producing mostly whitish and fancy coloured pearls of medium size – larger than akoya pearls and smaller than pearls grown in *Pinctada maxima*.

Together with a group of investors I attempted to start a pearl farm there about twelve years ago. Because of the remoteness of the area – nearly 200 kilometres north of Port Sudan across an unmade desert road – and the poverty and untrustworthiness of the inhabitants, plus the difficulty of keeping experienced foreign experts in such a remote location, we were obliged to abandon the project after a few years and considerable loss of money.

- **Government stability and regulations.** As pearl farming is necessarily a long-term investment it is very important that there is stability in the relevant government. In most cases it is also an advantage there are some regulations by the relevant government authority. In Australia for example there are very strict regulations regarding the number of wild pearl oysters that may be harvested from the natural pearling grounds. Very accurate records are kept on the natural population of wild pearl oysters in the different zones, and if it is calculated that an area is being over-exploited, that area may be closed to diving for several years to allow the natural population to recover. This ensures that the wild oyster stocks will not be depleted – rather like cutting down selected trees without destroying the forest. Each company is allocated a certain quota and the penalties for exceeding that quota are extremely severe. The allocation of pearl farm sites are also controlled and farms are not allowed to be in close proximity. On the other hand, in Tahiti for many years there were no controls at all which resulted for some time in a serious over-production and a dramatic fall in prices for the product. In recent times the Tahitian administration has introduced regulations regarding farm sites and the quality of pearls which may be exported. Since these rules were introduced, the prices of Tahitian pearls have gradually improved. In the Cook Islands there is only one atoll (Manihiki) which is really suitable for pearl farming. There are no controls by the Government authorities. Almost certainly, the occasional outbreaks of disease and pearl oyster mortalities in this lagoon have resulted from too many farms in a small area and overcrowding on the pearl farms causing a fall in the quality of the pearls being produced.
- **Marketing.** Many pearl producers establish pearl farms without first considering how they will market their product. There are many pearl merchants in the world capable of handling large crops of pearls, but they would have to sort the pearls into the different shapes, colours and qualities prior to on-selling to their different clients. If for example if it is only a small crop of a few thousand pieces it is difficult to make pairs or necklaces etc. In earlier times in Australia each producer had their favourite pearl dealer, principally Japanese. It sometimes happened that a particular producer may be in some financial difficulty and may accept a lower price for their crop or for a particular shape or size. The pearl dealer would then sometimes go to another producer and say ‘but look what I have bought from your competitor while you are asking 10% more’. What has now happened in Australia is that there are only two large pearl dealers, Autore and Paspaley, who handle the marketing for all of the Australian producers. Both these companies know the prices very well and they set correct prices, below which they will not sell. The crops from the different farms are generally mixed together and it is far simpler to make pairs for earrings and strands etc. In this way the farmer generally achieves a far better price for their crop and a better financial return, even after paying a

small brokerage fee. In Tahiti also it is gradually developing that the individual smaller farmers often combine with others to make sizeable parcels which can be sorted into the different categories - sizes, colours, shapes, qualities etc.

- **Pearl farming of the future.** Pearl farming has become far more sophisticated and much more efficient in recent years. Understanding the genetics of pearl oysters and breeding from selected brood stock to produce faster growing pearl oysters of the desired colour is now almost a necessity. It is becoming more and more important to produce high quality pearls and it is far more efficient to grow a smaller number of pearl-bearing oysters, rather than a larger quantity of animals which may produce medium or low quality pearls.
- **Summary.** I suggest that a prospective investor should be very careful and really seek expert advice before he or she decides to commence pearl farming. Unless the investor really understands the pearling industry and/or has experienced management in his/her employ the way to make a small fortune out of pearl farming is to begin with a very large fortune.
- (1971 words)