

***Kappaphycus* Farming: Farmer's Experience**

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My experience in seaweed farming started in 1995, but the concept was initiated after my visit to the United States of America in the early nineties. It came to my surprise during my journey to that country to know that farmers own vast land areas and that they are among the wealthiest people in the region. Ironically, when you talk about farmers in the Philippines, they are the people living in the poverty line or in the rural places.

When I came back from the tour, the thought of farming seaweed dawned on me. Not for the reason that I wanted to be wealthy like the American farmers but for a novel purpose of initiating a small of seaweeds farm considering the resources available in Zamboanga. Though there have been talks that majority of group farming was not successful, the idea didn't dampen my enthusiasm.

The growing demand of seaweeds would likely continue, hence, the only way to sustain the demand of our company is to put up farms that will produce the necessary quantity and quality without relying from others.

History

Sometime in 1995, my family started farming *Kappaphycus striatum* in Arena Blanco, Zamboanga City. Initially, 10 families were engaged in deep sea farming using the multiple raft method. Two rafts measuring 500 m² each were given to a family and a total area of 1 ha was planted. Five small and two medium size boats were provided for planting and harvesting purposes. Likewise, a small platform for drying the harvested seaweed was built as part of the shelters of the planters. The average monthly production was 60 t fresh weight or an equivalent of approximately 10 t dry weight.

Through the years, a lot of people migrated from Sulu and Tawi-Tawi to Zamboanga City and engaged in seaweed farming through our assistance. As the pioneering family in seaweed farming in this area, shelter, food, and other basic necessities for living were provided on a credit basis during the planting season. After harvest, all credits were deducted from the sales. Omar General Trading played a significant role in seaweed farming in this area since it provided farming materials ("tie-tie", ropes, binders, styrofoam floats, steel bars) and financial assistance for the basic necessities of the people.

The method of culturing the seaweed is unique and it is only in this part of the Philippines where the multiple raft long line method is practiced. It is adopted in deep seawater at > 5 m high. However, it is the most expensive way of farming seaweed. The cost of one 500 m² raft is about PHP 15,000.00 (bamboo, tie-ties, ropes, anchor, binders, labor and seedlings). The fixed off-bottom and hanging long line monoline methods, which are less expensive are mostly used in Sulu and

Tawi-Tawi.

After a while, a lot of farmer groups in the neighboring areas replicated the culture technique because they found the concept quite adoptable. They believe that seaweed farming is more profitable than fishing as a source of livelihood. Because of the expansion of cultivation areas brought by an increased number of seaweed planters, Tictauan Is. and its neighboring areas increased its monthly production from 400 to 20,000 bags of dry '*cottonii*' seaweed.

Production

The Kasanyangan Seaweed Planters Association (KSPA) was organized as a result of the increased number of seaweed planters in the area. It is composed of 14 farmer groups in different production areas in Zamboanga City Tictabon Is., Arena Blanco, Pangapuyan, Layag-Layag, Bana Lipa, Manicaan, Sinunuc, and Caragasan. It has a total membership of 378 comprising more than 300 families. Today, there are 768 rafts occupying > 38 hectares of sea area. The production capacity ranges from 60 to 2,304 tons fresh weight and 10 to 391 tons of dry '*cottonii*' seaweed a month. This only refers to our farm production alone.

There was a tremendous increase in growth in terms of number of farmers and the production output. We are proud to say that we played a vital role in the industry more than anyone else. No other companies would think of doing the same thing. Some have tried but they failed.

The success of seaweed farming in this area as initiated by my family is a big milestone in the seaweed industry and more importantly to the hundreds of marginal fisher folk in this place despite the absence of technical and financial support from the government and academic institutions. The role of KSPA and Omar General Trading in improving the standard of living of the fisher folk is beyond question.

Common problems

Several problems like disease, farming practices, quality, price, and natural calamity were encountered since the beginning, however, the magnitude decreased as seaweed planters made adjustments in their farming practices as understanding of the biology and ecology of the seaweed was increased.

- the occurrence of "ice-ice" disease had damaged 60% of the farm output in the area. The adverse effect caused farmers to alternate fishing and seaweed farming as a source of livelihood. Large amount of money is needed to finance the rehabilitation of a farm to bring production levels back to where it was before. It is estimated that PhP 8,000.00 per raft is needed for rehabilitation.
- farmer's malpractices. At present, salting the newly harvested seaweed is a crucial issue being discussed in the industry. The practice of salting is done during the rainy season among farmers. Moderate salting enhances the drying process of the raw material. The only problem is that, farmers abusing the use of salt. They believe that it will increase the weight of their produce giving them extra profit but in reality, it adversely affects the quality of the carrageenan. Salting is also practiced in Indonesia. Premature harvesting of

30-45 day old young plant is another issue. Culturing the seaweed beyond 45 days is somewhat not practical because the seaweed will fall due to its heavy biomass. The initial biomass of the 'seedling' is approximately 350-500 g, hence, growth period is shorter.

- unstable price of dried seaweed is another problem for the Zamboanga produced seaweed. It is priced PhP 2.00 lower than in other places. The sudden drop of prices early last year from PhP 24.00 down to PhP 14.00 was painful for the planters, thus, the planters were discouraged. There is discouragement among buyers in the area. Brokers of some traders and exporters in the city go to the farms pirating the supply of our farmers by offering a price higher than ours and less restrictions on quality. Definitely, the farmers find the offer quite enticing because they would no longer need to be conscious on the restrictions concerning quality. These farmers are convinced to sell their product to these brokers who in return sell the crop to the prospective traders and exporters.
- typhoons that occur only a few times during the planting season also affect production. Farms heavily affected by typhoons require rehabilitation. However, no company is willing to take the risk of helping the farmers to acquire the necessary quantity they need at the end. Likewise, typhoons decrease 10-20% of the production due to delays in drying time of the raw material.

Low production is the main problem right now of the KSPA and neighboring farm areas. Our production output for the past two years had a dramatic fall to about only 60% since 1999.

Actions to be taken

In the late nineties, it wasn't known that Zamboanga produced majority of the seaweed in the Philippines. But it was regarded as the seaweed capital of the country. The present problems need a closer look from the people in the industry like the farmers, traders, exporters, processors, government and non-government sectors. A cohesive effort among these key players to solve the problems is thus needed to sustain the seaweed industry. However, I would like to stress the following points:

Rehabilitation. The farms need rehabilitation especially those that are destroyed by diseases, typhoons and sudden drop of price. We do not brag that we can still do this on our own as in the past. We do not also beg for we are not used to begging. But we would like to awaken the minds of the people in the government and non-government institutions to help us not just for the benefit of ourselves but also for the economy of our country as a whole.

Strong government support. I would like to refer this issue to the government sector. We are glad to know that our present administration has several projects under its wing to support the livelihood of the people in our country. The agricultural and fishery sector program of the present administration is most welcome, however, proper implementation is to be done so that the appropriate beneficiaries of the program will be the recipients of the programs.

Strong support from the traders/exporters and processors. Traders, exporters and processors must invest not only in the exportation or processing of the raw material, but also in the production

of the seaweed to ensure a continuous and stable supply of good quality raw material. Without good quality raw material, nothing can be processed into carrageenan.

Conclusion

Lastly, we are all concerned with the seaweed industry and after relaying to you my experience, I hope I was able to enlighten your thoughts. I know we share the same sentiments and whatever happens to our seaweed industry, we will all be affected. Now, I would like to tell you that what I had started was not for my own advantage nor the advantage of our company, but it was intended to provide livelihood to the once less fortunate but now much improved Filipinos, economically and socially.

The quest in seaweed farming continues as there are new challenges in the horizon. What lies ahead of the industry depends much on you and me as we work together hand-in-hand.