

THE AQUA PROFESSIONAL

NEWSLETTER OF THE SOCIETY OF AQUACULTURE PROFESSIONALS

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NEW YEAR MESSAGE

By SAP President Dr. A. Victor Suresh



Two thousand twenty was a year that started with great expectations because it was a year with a nice round number that sounded like 20/20 which stands for good visual acuity of the human eye. The expectations crashed and burnt quickly with the arrival of the one in a 100 years global pandemic. Nearly 100 million people were infected and more than two million died. With few exceptions, every human enterprise was affected. Global food production in which we play a small, but vital role, was relatively spared but we went through the pains nevertheless. No wonder then that humanity waited for 2020 to end and a new year with vaccines and other control measures to begin.

For us in aquaculture, viral pandemics are nothing new. Those in shrimp aquaculture have learned to live with white spot syndrome virus for almost 30 years. We know that science requires time, energy, infrastructure and capable people to come up with solutions but we know for sure that science alone can deliver the solutions. That realization was among many important lessons we learnt from 2020 that I hope will not be forgotten when coronavirus is eventually laid to rest.

In many ways 2021 will mark a new beginning for humankind. Most economic enterprises will reinvent themselves as they rise from the economic devastation and it will have a broad effect. I sense that changes will occur in food production too. The world, while being grateful that food production and delivery chains did not collapse, will work to value and cherish food and health more. Aquaculture will find continued wind beneath its sail to propel towards its destiny of placing affordable healthy food on the plates of the poor and providing enjoyable healthy food for whom affordability is not a key concern when it comes to eating. In India, we will see continued expansion of aquaculture in regions where aquaculture or fish consumption was not so popular in the past. New ways to deliver fish and shrimp to the consumers will be found. For aquaculture professionals the exciting and purposeful journey of taming the waters and harvesting food would continue well beyond 2021.

Happy aquaculturing in 2021 dear friends.

Victor Suresh
President, SAP

THE ANNUAL GENERAL BODY MEETING OF SAP HELD ON THE 12TH OF DECEMBER 2020 IN CHENNAI.

SAP's Annual General Body Meeting was held on December 12, 2020 at the Raintree Hotel in Chennai. The Registrar of Societies had stipulated that the AGMs had to be conducted in person and not in virtual mode. They extended the deadline for holding the AGM to the end of the year. Due to the continued pandemic threat, members were approached well ahead in time and the ones who expressed interest in attending in person were invited to the meeting and requested to adhere to social distancing and face mask policies.

The meeting commenced with the customary welcome address by the President Dr A. Victor Suresh followed by the presentation of the Annual Activities Report by the General Secretary Dr G. Ramesh and Audited Accounts by the Joint Treasurer, Mr Simon Chelladurai.

Following amendments to the Memorandum of Association were passed unanimously at the AGM:

1. Increase in the number of members in each committee from three to six
2. Creation of a new committee responsible for policy interventions with the government
3. Creation of a Past Presidents' Council to advise the Executive Committee
4. Creation of an Advisory Board for the Executive Committee
5. Introduction of Joint Treasurer as an office bearer to assist the Treasurer

The floor was then opened for members to express their thoughts. The Joint Secretary Mr Senthil Kumar offered a vote of thanks.

REPORT OF THE 2-DAY WEBINAR FOCUSED ON SHRIMP FARMING

SAP organized a two day webinar "Overcoming the Hardships in Shrimp Farming: Lessons Learned from India and Elsewhere", on January 7th and 8th 2021. Renowned experts from major shrimp farming countries and India's successful shrimp farmers shared their insights on methods to overcome hardships. This virtual seminar was put together by our Events committee



headed by Mr Madhusudan Reddy, ably assisted by Mr Saji Chacko, Mr Ravi Kumar Yellanki and Mr D. Vijay Anand, had the objective of helping the shrimp farmers of India. The program was viewed by 435 participants on Day 1 and 314 participants on Day 2. The webinar was viewed not only from India but also from Ecuador, Indonesia, Malaysia, Norway, Thailand and USA, across Youtube and Zoom platforms, and over 2000 others have watched it since then on SAP's YouTube link.

Dr Manoj Sharma, the Moderator for Day 1 opened the session by introducing the speakers, who were farmers from India operating farms that ranged from 5 hectares to 500 hectares, from basic to modern systems, so as to give the viewers a full range of the present situation in India. Mr V. Balasubramaniam, whose farm is situated in Nagapattinam district, Tamilnadu, believes in following the basics of shrimp farming in order to succeed in the long run by choosing healthy seed and providing a healthy growth environment. Mr Ali Hussain, another successful farmer from Tamil Nadu in Sirkazhi, also emphasized careful attention to the basics in achieving a very successful crop in 2020 despite encountering WFS and many other obstacles. Both the farmers highlighted the fact that we cannot change the source of water but we can care for our environment. They also advised that production has to be within the carrying capacity of the system.

Mr Hetal Shantilal Patel of Gujarat produced 390 MT shrimps from 34 ha in 2020 by adopting multi-stage farming technology. His success is remarkable because his farm is located in an area that has many, many farms. He has developed a complete recirculation model and practices a 2-stage nursery phase in order to reduce the time spent in the grow out stage. He believes in maintaining small ponds with good aeration and regular water exchange and sludge removal.

Mr Y. Ravindrababu from Ongole district of Andhra Pradesh, practiced intensive farming by stocking bigger size PLs in lined ponds with blower aeration, maintaining biofloc and a stocking density of 200 pcs/sq.m. Mr P. Veerachamy, another farmer from Andhra Pradesh, owns a 100 acre farm near Bapatla and uses only raw seawater. He uses the biofloc system and noticed very low occurrence of vibrio and WSSV and very stable pH. Mr M. Rama Raju from West Godavari district does 3 crops a year with a stocking density of 25 - 25 pcs/sq.m. His success is mainly attributed to good farm management practices and constant monitoring of shrimp health. Presentations from Mr Veerachamy and Mr Ramaraju clearly indicated that age of the pond does not matter if your pond preparation is good and that major diseases like EHP can be controlled by good soil preparation and by using fermented feed additives.

Capt. Ranjitsinh Patil from Maharashtra, has both extensive farms and semi intensive farms, spread over 350 ha WSA. He compared productivity and profitability of the large traditional ponds and smaller semi-intensive ponds and said that the large extensive ponds can help reduce the cost of production and are profitable if biosecurity is managed well. The farm supplies the local market regularly throughout the year and gets better prices than in the export market.

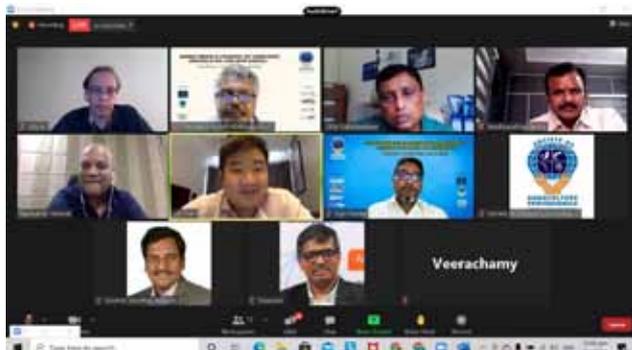
The moderator, Dr Manoj Sharma expertly summarized the take home points and remarked that shrimp farming was like playing a video game where the level of farming gets more and more difficult as we reach higher levels of production. But, the case stories presented by his enterprising peers in shrimp production show the ways to remain successful. Faithful adherence to the basics of understanding and operating within the carrying capacity of the system or skillfully adapting the management method to the

changing realities of farming conditions are extremely important, he concluded. The 3-hour program can now be watched at https://www.youtube.com/watch?v=trAll_Bi7AA.

The second day event brought four shrimp farming experts from Asia to discuss how farmers in the region fare in production. Mr Madhusudhan Reddy, the Moderator for Day 2, introduced the four panelists participating in the round table discussion. The experts from major shrimp farming countries in Asia included Mr Saji Chacko, a well-known shrimp farmer in Gujarat, representing India; Mr Dilip Sathyanathan, President Director of PT. Indonusa Yudha Perwita, Indonesia; Dr Loc Tran, from Vietnam, and one of the key researchers behind the discovery of the causes of EMS in shrimp; and Dr Olivier Decamp, an expert in microbiology from Thailand.

Regarding the status of shrimp farming in 2020, most areas showed a setback of 15 -20% either due to logistical reasons on account of the pandemic or due to poor survival and lower growth rates because of EHP. In Indonesia however, exports were good and there was a steady rise due to the starting of new farms. Vietnam saw a fall in prices during the first half due to panic harvesting and low production in the second half due to bad weather.

There is a gradual shift in farming practices from the traditional system to two stage farming in India and also the introduction of HDPE lined ponds over the earthen ponds. Multistage farming is practiced extensively in Vietnam. The advantages of multistage farming include easy detection of disease in the PL stage in the nursery, reduction of nitrite toxicity, better survival as the stress is reduced and impact of EHP is minimized. Survival rate at each stage of farming depends on having disease free stock, a good system, stable environment and suitable genetics, These steps ensure a survival rate of over 90%. In Indonesia, multistage farming had not picked up as high stocking rates and transferring between ponds caused stress. Direct stocking is giving good results so most farms follow this system. Multistage farming has been practiced by a few in India with promising results. With the EHP problem this is probably the way forward for India. Multistage farming is being implemented slowly in Thailand but not at the level of Vietnam.



Feed, water and soil parameters play a crucial role in shrimp farming especially to control disease. In Indonesia, farms were predominantly sea-based with a pH variation of 0.2. Growth is definitely better in low and medium salinities. The key parameter is dissolved oxygen and it should be maintained above 5 ppm with the help of aerators or diffusers. Soil parameters are extremely important and accumulation of organic matter can alter minerals and alkalinity. Lined ponds with regular sludge removal show lower occurrence of EHP. Oxygen levels are maintained by providing shading to avoid phytoplankton fluctuations.

The preferred stocking densities in Thailand, was 60 - 120 pcs/sq.m. In Vietnam, in low saline waters it is 30 - 50 pcs/sq.m., in earthen ponds it is 50 - 100 pcs/sq.m., plastic lined ponds it is 2500/sq.m in the nursery phase, 300 - 500/sq.m, at 1 g size, and 50 - 70 pc/sqm at 15 g size. Biomass is maintained at 3 - 5 kg/sq.m., depending on salinity and oxygen. In Indonesia the stocking density in earthen ponds was 80 - 100 pcs/sq.m, and in plastic lined ponds 150 - 180 pcs/sq.m.

The future of shrimp farming will largely depend on the balance between the efficient use of resources and limited impact on the environment. *Vibrio* is closely associated with white feces syndrome and EHP. Healthy seed, well prepared ponds, and clean water can control vibrio. When temperature drops, feeding should be reduced. Nutritious diets for 1-2% ABW (42% protein) can help maintain growth. Quality of feed is more important than quantity. Attraction to feed and its efficient use, reduce waste and keeps the pond cleaner. Introduction of fermented ingredients in the feed can improve digestibility. Adding prophylactics and immunostimulants to the feed can make the shrimp healthier to fight vibrio. Use of auto feeders minimizes wastage. In lower salinity, the vibrio population is less hence there is less infection. In the nursery phase you could use health boosters with a high protein diet. Nutrition has to improve immunity. If the system is good, normal feed is sufficient. Functional feed should have some criteria to attract the animals. It costs more, so it needs to be used prudently. It is not a substitute to good management.

With regard to genetics, there are three different SPF lines: growth line, tolerant line, and balanced line.

We should use the line that our system can support. Faster growth line will reach break even point faster and give more profit. In China, a lot of disease and contamination are present so the tolerant line is better. Fast growth line is an aggressive feeder so we should have the right feed to support that. It is not only the diet that matters, animal health depends on other things, farmers will see results if they work along with the technician and give the right conditions for growth.

The SAP President, Dr Victor Suresh summarized the panel discussions and his take home message was that basics don't change and there are no shortcuts. On the other hand, there are new opportunities, like new genetic lines, new systems like multistage rearing for us to consider. We have to choose strains that are suitable to our systems or we have to upgrade our systems to suit the requirements of the strain. There are solutions to all the problems and the indomitable spirit of farmers has helped them overcome the challenges over the last 30 years and adapt to all the changes. He suggested that we don't look at just one aspect of farming but take a more holistic approach. The second day event can be watched at <https://www.youtube.com/watch?v=tlu-KGEKIsQ>.

All SAP events of the past eight months can be watched on our YouTube channel: https://www.youtube.com/channel/UCzfxp-IVy8IFXP16iTvH_Lg

SAP WELCOMES NEW MEMBERS



Mr K Phaneendra Kumar, is a graduate in Fishery Science from SVVU, Tirupati, 2010 batch. He was recruited into Virbac Animal Health India Pvt Ltd through campus selection. He worked as a Business officer in the Kakinada market from August 2014 to April 2018 when he was promoted to be the Area Business Manager. Now he is leading a team of 7 sales representatives in the markets of Bhimavaram and Ganapavaram areas in West Godavari and Srikakulam. His areas of expertise include Sales, People Development, Shrimp & Fish culture.

Mr S. Senthilkumar obtained his Bachelor's degree in Zoology (1990 -93) from the Government Arts College, Chidambaram and his Masters in Marine Biology



and Oceanography (1993 -95) from CAS in Marine Biology, Annamalai University. He started his aquaculture career in black tiger farming in 1995 and worked in freshwater fishes (Catla, Rohu, Mirgal, Grass, Common, Tilapia, Anabas) as well. He worked in shrimp feed and additives marketing in SDC Agro Vet, Grobest and Gold mohur feeds for Tamil Nadu, Andhra and Kerala markets. His first overseas assignment was in Singapore handling open sea cage culture of Tiger and Black Groupers, Red and Golden Snappers, Cobia and Lobsters. He also did Asian seabass rearing from hatching to larvae in the same cage farm. He moved to Saudi Arabia to work in a seabass hatchery, indoor nursery and grow out and also took care of seabream and indicus grow outs. He is one of the team members to introduce commercial seabass farming to Saudi Arabia. He also worked in corporate farms like Auomaritec (Vannamei, Mullet, Milkfish, Seabass, Cobia), Bismi (Vannamei) in Tamilnadu and West Coast Farms (Vannamei) in Gujarat and Maharashtra.

Currently Mr Senthilkumar is the Operations Manager of Taprobane Seafoods Group which under the guidance of Mr. S. Santhanakrishnan introduced vannamei shrimp aquaculture to Sri Lanka. He is now handling three sites of intensive culture of vannamei in lined & earthen ponds, semi biofloc small lined ponds and circular tanks. In Sri Lanka his team has reached a production of 72 tons/ha of vannamei shrimp in a semi-biofloc system and is trying to break this mark soon.



Dr S. Saravanan currently works as the Global Product and Technical Manager for RAS at Skretting, Norway. He is responsible to develop and deliver high performance fish feed and technical service to RAS customers. He received BFSc from Fisheries college and Research Institute, Tuticorin and MFSc in Fish Nutrition & Biochemistry from CIFE, Mumbai, and PhD in Fish Nutrition from Wageningen University, Netherlands. He also spent some of his time during his PhD at INRA, France. Soon after his PhD he

broadened the scope by working as Insect Husbandry Scientist at Ynsect, France. Later, he moved to Norway to work at Skretting Aquaculture Research Center as a Researcher in Fish Nutrition.



Mr Aditya Dash is the Managing Director of Ram's Assorted Cold Storage Limited. Ram's is a vertically integrated frozen shrimp exporter from Odisha. Ram's has their own hatchery, corporate farms, a network of over 5000 shrimp farmers and 2 processing units. In the near future Ram's would like to recreate this seed to plate value chain in other species such as Asian Seabass, Grey Mullet and Fresh Water Shrimp. Ram's is part of the Suryo group, a pioneer in the field of aquaculture in India, started by Mr. Amarendra Dash in 1978. The group is also involved in the hospitality, media and packaging industries.

Mr Aditya Dash graduated from George Washington University, Washington DC in 2006. From 2008 onwards he restarted the seafood/aquaculture operations of the family business. He loves to learn and read about History, Philosophy and Mythology. He has completed graduate level certificate courses in Public Policy with a specialisation in Defence and Foreign Affairs from the Takshashila Institute, Bangalore. He has completed an online course in sustainable aquaculture from the University of St. Andrews. He is presently the youngest member of Marine Products Export Development Authority (MPEDA).

He enjoys making films, and his film "Fish For Thought" was screened at the Cairo International Film Festival for children in 2012. He loves to Stand Up Paddle and is passionate about developing coastal communities through sustainable aquaculture.

BEST SHRIMP HATCHERY AWARD FOR MR. RAVI KUMAR YELLANKI, VAISAKHI BIO MARINE PVT. LTD., ANDHRA PRADESH

The Government of India, Ministry of Fisheries, Animal Husbandry and Dairying, Department of Fisheries, in association with National Fisheries Development Board (NFDB) had announced awards for outstanding farmers on the occasion of National Fisheries Day, on the 21st of November, 2020.



World Fisheries Day 2020 Live 21st Nov 2020 11am onwards

SAP is specially proud of our Past President Mr. Ravi Kumar Yellanki of Vaisakhi Bio Marine Pvt. Ltd, Andhra Pradesh for receiving the award for Best Shrimp Hatchery. We congratulate him on this achievement and wish him many more accolades for his contribution to the industry.

THE KOI JUNCTION WHERE PEOPLE MEET JOY

The Koi Junction is a one stop shop for all your Koi pond ideas to blossom into reality. The brainchild of Anil Ghanekar, a Founding Member of SAP, this Bangalore-based venture provides custom built biofilters to maintain pristine water quality in your koi ponds. Together with his partner Cdr. Onil Gandhi, Mr Ghanekar has set up an indoor, recycling pond facility to breed

and rear Japanese Koi fish, which is known as a symbol of luck, prosperity and good fortune. The facility also houses a variety of aquatic plants providing a natural, beautiful and balanced ecosystem for the fish. The venture has a well-trained team to install the biofilters and maintain customers' koi ponds. It has designed and installed filtration systems in over a 100 koi ponds across India. To know more about the Koi Junction, please visit their website, www.thekoijunction.com or check out their Instagram page, @thekoijunction.

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