

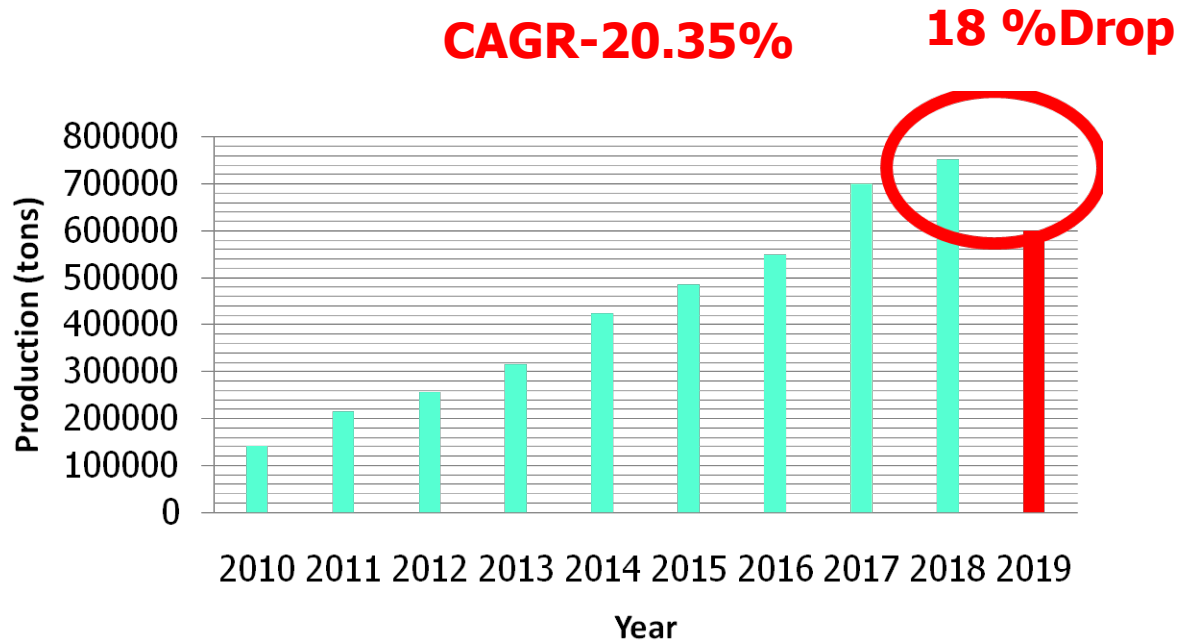
Indian Shrimp Aquaculture in 2019



Ravi Kumar Yellanki
President

Society of Aquaculture Professionals.

Indian Shrimp Production

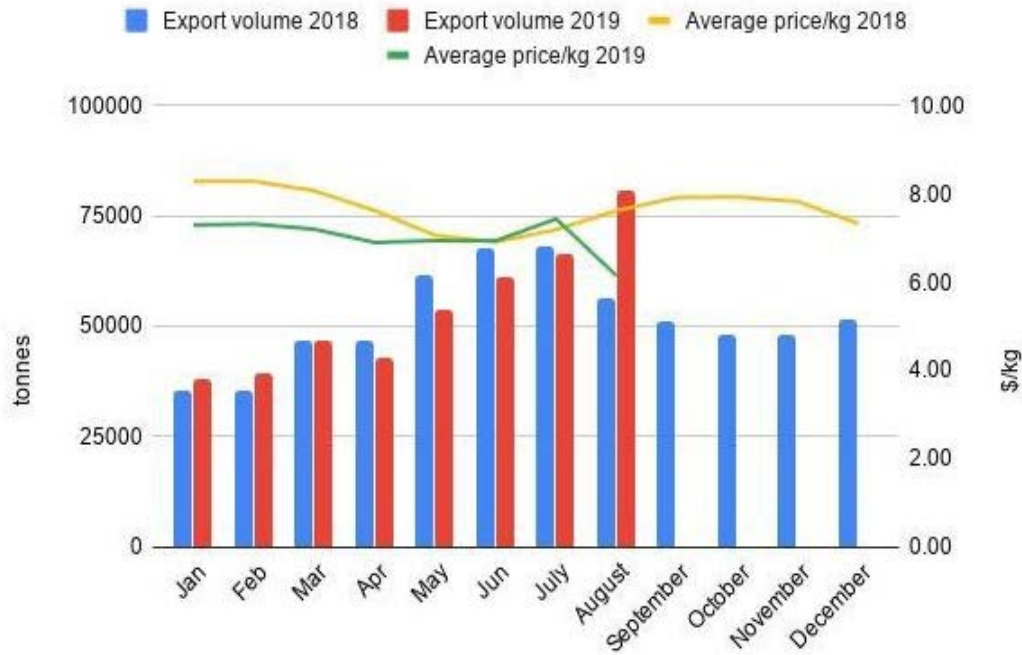




The Dropping Price

Year	Quantity Exported in (MT)	Value Million (\$)	Average price realized per (Kg) (\$)
16-17	434,486	3726.89	8.5
17-18	565,980	4848.19	8.0
18-19	613,738	4608.38	7.3

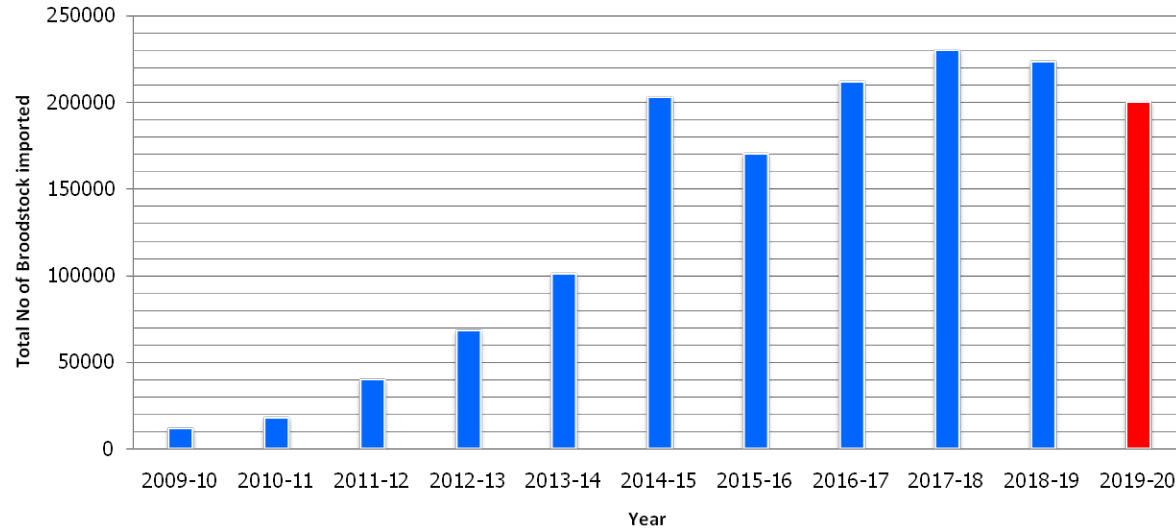
Price Realization in 2019







Broodstock imports

***P.vannamei* broodstock imports in India**





Broodstock imports in 2018 and 2019

Month	2018	2019	  %
Jan	24,000	23,000	4.16%
Feb	27,000	12,500	53.70%
March	23,000	10,000	56.52
April	10,000	11,800	18%
May	19,800	26,000	31%
June	21,500	21,800	1.3%
July	16,000	16,200	1.25%
August	10,000	13,000	30%
Sept	13,800	12,500	9.42%
Total	1,65,100	1,46,800	11.0%



Indian Shrimp Seed Production

Year	Monodon (Billion)	Vannamei (Billion)	Total (Billion)
2015	1.9	31.7	33.6
2016	1.3	41.5	42.8
2017	1.7	53.0	54.7
2018	1.6	72.0	73.6
2019 (estimated)	1.0	57.0	58



The Onslaught of Diseases

- The good old foe WSSV continues its tirade.
- Emerging Diseases (EHP and White feces) are one obvious reason for slowdown of the industry
- We need to get to the root of the problem
- SAP along with University of Arizona is conducting a detailed epidemiological study on white feces and EHP
- Emerging diseases reported anywhere in the World should be added to the list of diseases to be checked at the Aquatic Quarantine facility.

Results from the cohort study

AHPND	No AHPND but bacterial lesions	Early mortality but No HP lesions	Collapsed HP epithelium	Normal HP
03, 07, 11, 12, 16, 20, 32, 34, 40, 45, 47, 50, 52, 54, 55, 58, 73, 74, 82, 83, 84, 87, 90, 91, 92, 93, 105, 110, 112, 116, 119, 122, 126, 131, 144, 150	04, 05, 21, 24, 44, 51, 69, 73, 78, 86, 88, 96, 99, 101, 117, 130, 133, 136, 139, 143	57, 70, 98, 100, 111	02, 15, 17, 25, 26, 29, 30, 37, 38, 46, 48, 49, 53, 64, 65, 76, 80, 81, 95, 97, 104, 109, 113, 114, 115, 123, 125, 127, 128, 134, 135	01, 06, 08, 09, 10, 13, 14, 18, 19, 22, 23, 27, 28, 31, 33, 35, 36, 39, 41, 42, 43, 56, 59, 60, 61, 62, 63, 66, 67, 68, 71, 72, 77, 78, 85, 89, 94, 102, 103, 106, 107, 108, 118, 120, 121, 124, 129, 132, 137, 138, 140, 141, 142, 145, 148, 149
36/148 (24%)	20/148 (14%)	5/148 (3%)	31/148 (21%)	56/148 (38%)

Infected with the microsporidian *E. hepatopenaei* (EHP) 72/148 = 49%

Mortality <35 days (study definition of EMS) = 36/148 = 24%

Infected with white spot syndrome virus (WSSV) = 8/148 = 5%

Covert mortality nodavirus (CMNV) = 64/148 = 43%

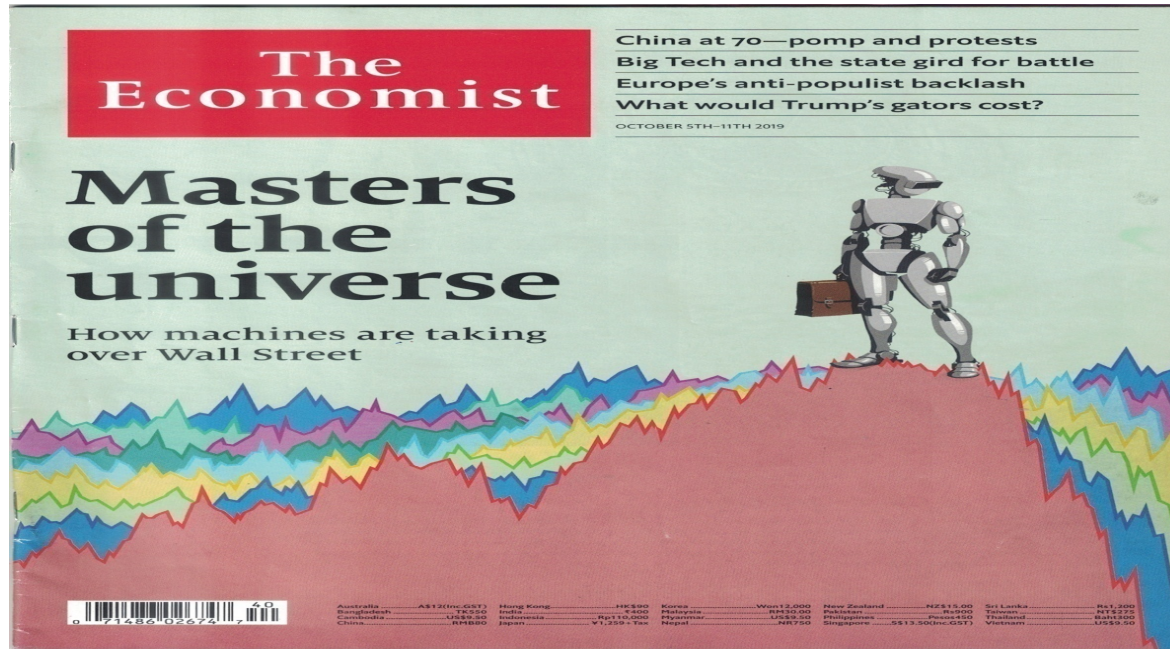
Specimens 146 and 147 un-readable (poor fixation)



Broodstock/ Breeding

- Paradigm shift from SPF to SPT/SPR
- Most of the breeding companies are working on it
- Some companies are working on further improving the growth rate to suit intensive farms.
- Need to bring in new genetics into the country
- Import of brood stock from large scale shrimp farming countries has to be avoided
- Need to work on SPT/SPR stocks for EHP.

Masters of the Universe



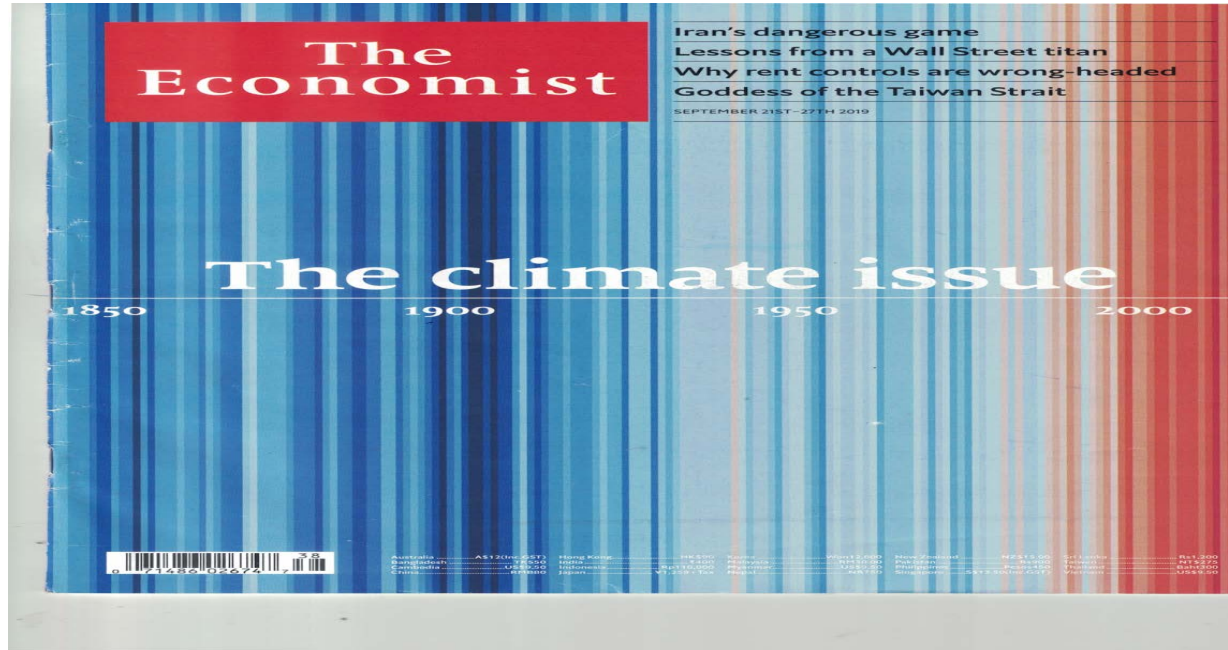
Artificial intelligence could soon help the farmers mitigate disease risks !



Climate Change

- The climate change touches everything & everyone.
- It has an impact on stocking pattern and hence is taking toll on Indian shrimp production.
- Cloud burst & flash floods badly affected low lying farms in Gujarat and Andhra Pradesh.
- The rising summer temperatures continue to affect vannamei growth .

The climate issue



Global warming ;the threat of rising temperatures!



Species diversification

- All said and done, vannamei is a temperate species.
- It doesn't do all that well when the temperature (water) is above 32 C.
- At temperatures higher than 32 C, the feed gut passage time is less than 45 min.
- The indigenous species of monodon & indicus can withstand higher temperatures better.
- Running mortalities & white feces issues look to be more pronounced in summer.
- Indicus can be domesticated with relative ease and is amenable for higher stocking densities also.
- Indicus & monodon added to the basket with vannamei can give option of crop rotation to the farmers and enlarged market opportunity.



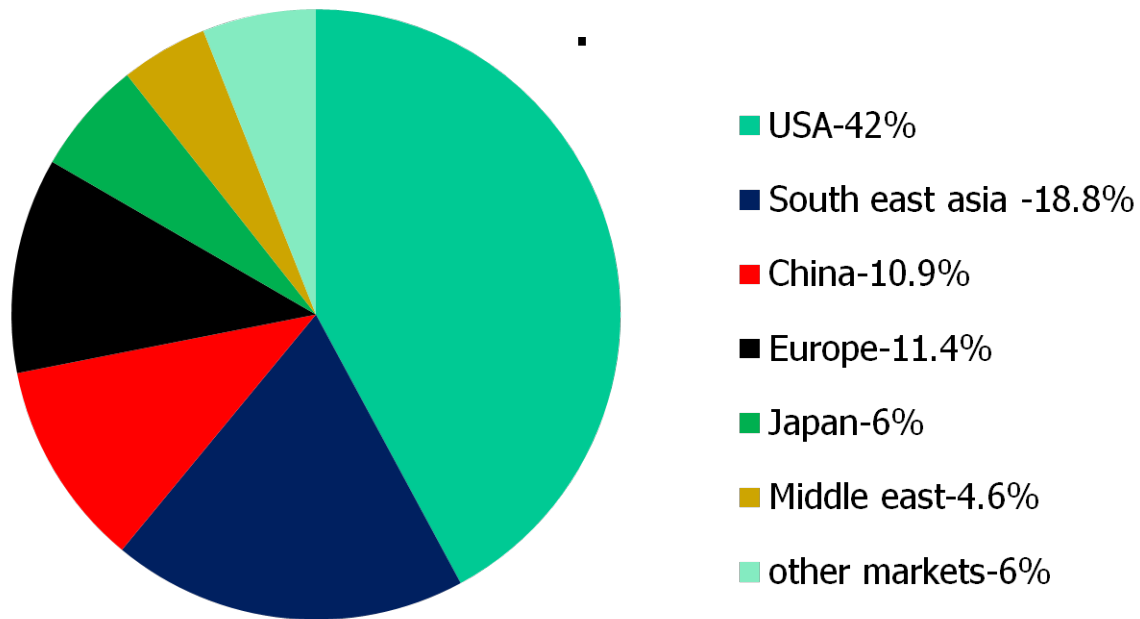
Indian Shrimp Exports During 15-19

Country	15-16 (MT)	16-17 (MT)	17-18 (MT)	18-19 (MT)
USA	134,143	165,827	212,780	258,551
South East Asia	65,187	105,763	138,085	115,767
EU	81,849	77,178	69,899	70,367
Japan	34,204	31,284	30,038	36,616
Middle East	17,476	19,554	19,062	28,505
China	9,541	7,818	10,723	66,849
Other Markets	31,463	27,063	29,572	37,084
Total	373,866	434,487	510,159	613,738

Data Source –MPEDA,India



India Shrimp Export basket 2018-2019





World Shrimp Export Statistics

Years	2013	2014	2015	2016	2017	2018
India	231009	338636	369018	412924	541303	583657
Ecuador	148658	229073	284988	324340	384806	464272
Argentina	91258	107476	120786	159889	183280	185440
Vietnam	252238	284225	184626	223122	No data	180808
Indonesia	109857	131150	129992	134496	142300	148508
Tailandia	88206	72096	68805	100956	95816	71245
China	134224	129438	95049	97351	92730	71385
Honduras	233056	52398	48857	56066	60914	24093
Bangladesh	42175	No data	33689	42429	40631	34647
Espana	29592	28242	34582	37760	38006	37576
Rest of Mundo	295980	331058	324588	378645	395839	358873
Total World	1656253	1703792	1694980	1967978	1975625	2160504

Data source: Trademap.org

India's Share in Global Market = 27%



Markets & Penetration

- As a leading exporter, we need to have lion's share in EU market which is the leading importer of shrimps with a volume of 8,64,000 tons
- All stakeholders are seriously working on zero tolerance for antibiotics and proactive measures are being taken
- Exporters are surely working on the process of moving up the value chain
 - Value addition
 - Establishing distribution network in the marketplace.
- We are working on newer markets as a leading exporter.
- We are also in the process of setting up an improved domestic market by establishing a cold chain and doing away with GST for processed shrimps



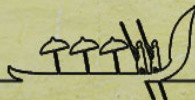
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www.aquaprofessional.org



Conclusion

- Mitigation of disease risk, increasing the market penetration in EU and establishing newer markets including domestic market should be the part of larger **GOAL** of the industry



Thank You....