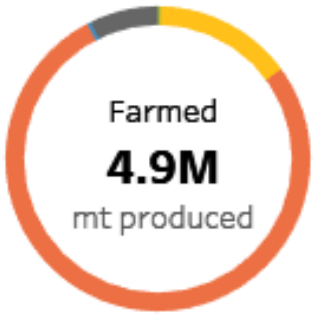
Changes in Market Forces that Indian Shrimp Farmers Should Focus for Profitable Production

October 2019

TOP PRODUCERS OF FARMED SHRIMP

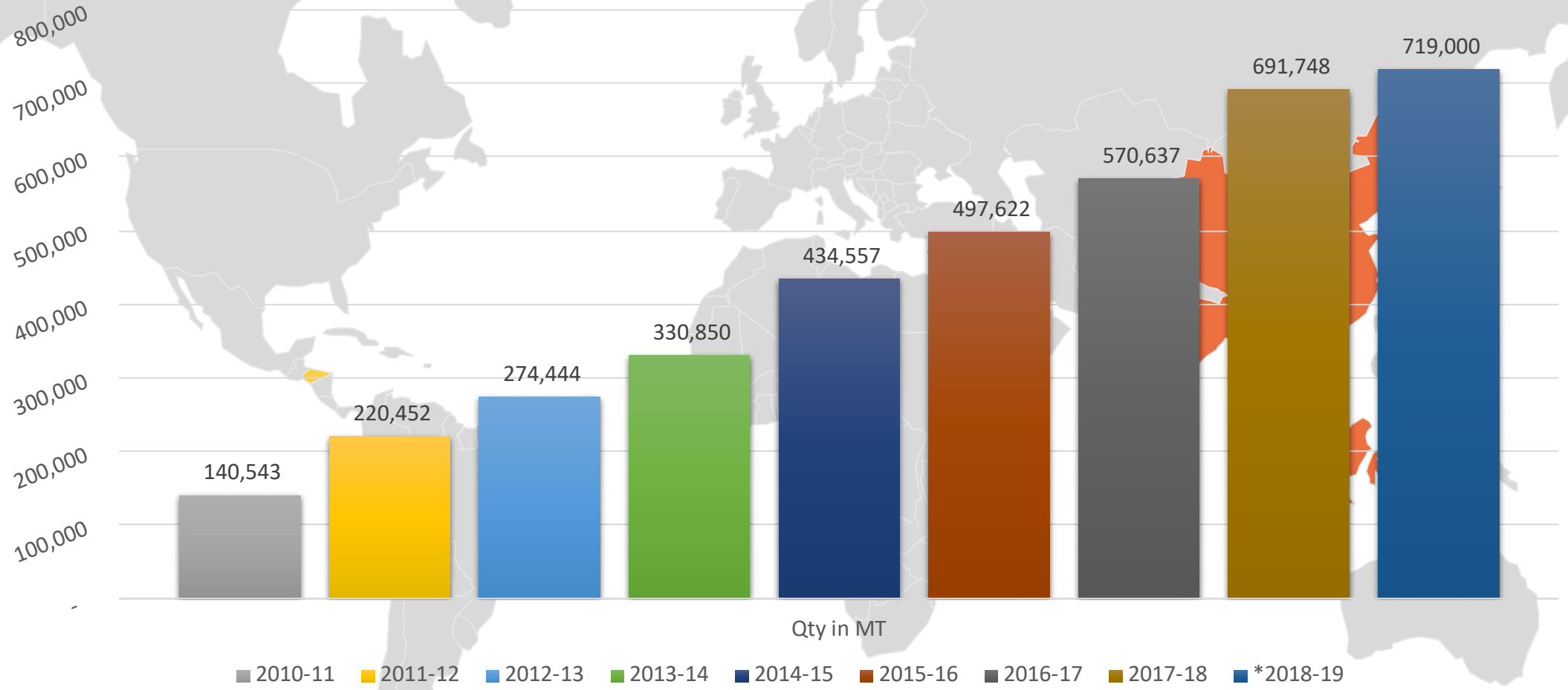


PRODUCTION BY COUNTRY

COUNTRY	Volume Exported (mt) | % of Production
China	1.7M | 34%
India	719K | 14%
Indonesia	645K | 13%
Viet Nam	624K | 12%
Ecuador	422K | 8%

Source: FAO

INDIAN FARMED SHRIMP PRODUCTION



**** 2018-19: Estimated***

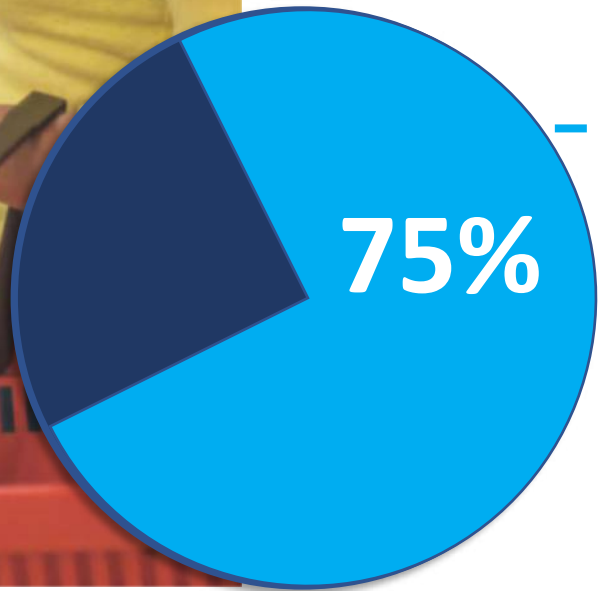
BUYER PRIORITIES

CONSUMER DEMOGRAPHICS

MILLENNIALS

- Born 1982-2000.
- Largest consumer demographic.
- Increasing in their purchasing power and economic contribution

They care about environmental and social efforts more than any previous generation.



of Millennials are altering their buying habits with the environment in mind.

CONSUMER DEMOGRAPHICS

MILLENNIALS

81% of Millennials expect and favor brands that have strong social and/or environmental commitments.

They want to know where their food comes from and how it was produced.

U.S. Millennials are projected to spend over $1.4 trillion USD in 2020 and are increasing their seafood purchases ~30% each year.


Ensuring Shrimp Production Meets Market Requirements
RAJASTHAN
Karachi
Muscat
Ahmedabad
GUJARAT
MADHYA PRADESH
Indore
India
ASSAM
NAGALAND
MEGHALAYA
MANIPUR
Patna
BIHAR
Bangladesh
JHARKHAND
TRIPURA
WEST BENGAL
Chittagong
CHHATTISGARH
ODISHA
Surat
Nashik
Mumbai
Pune
MAHARASHTRA
TELANGANA
Visakhapatnam
GOA
KARNATAKA
ANDHRA PRADESH
Bengaluru
Chennai
Bay of Bengal
PUDUCHERRY
TAMIL NADU
Madurai
KERALA
LAKSHADWEEP
ANDAMAN AND NICOBAR ISLANDS

MARKET REQUIREMENTS

- ANTIBIOTIC FREE SHRIMP
- BIO-SECURE FARMING SYSTEMS
- TRACEABILITY
- THIRD PARTY CERTIFICATION
- SUSTAINABILITY REQUIREMENTS

ANTIBIOTIC RESIDUES: CONTEMPLATE

- Major concern is antibiotic residues on product and the development of antibiotic resistance in the environment.
- Responsibility of all from Fishmeal suppliers to Farmer to Processor.
- Awareness required on the control of usage and verification of inputs.

ANTIBIOTIC RESIDUES: MARKET RISKS

- Antibiotic free shrimp supply is a pre-qualification.
- Potential to disrupt demand from source country.
- Importers and distributors answerable to the consumers.
- Customers will look at alternative supply sources.
- Rejection liability on suppliers.

ANTIBIOTIC RESIDUES: TAKE RESPONSIBILITY

- Taking responsibility not limited to non-usage.
- Test larvae before stocking.
- Verify source of farm inputs like feed, probiotics etc.
- Trust your supplier but verify for compliance.
- Although antibiotic contamination is limited to a few, it can be damaging to the industry.

BIO-SECURE FARMING SYSTEMS

- Absence of bio-security makes farms vulnerable.
- Bio-Security measures can reduce disease risks.
- Improved Bio-Security will lead to better farm management, better productivity and safe shrimp.
- Better understanding of Bio-Security requirements.
- Investment required for bio-security infrastructure.

MAINTAINING TRACEABILITY

- Traceability important tool in disease diagnostics.
- Accountability in the Supply Chain.
- Mandatory requirement for 3rd party certification.
- Awareness to be created across Supply Chain especially among small farmers.
- Maintaining backup documentation about input source, helps identify issues from suppliers.

THIRD PARTY CERTIFICATIONS

- Cost of certification high for small farmers.
- Currently packer driven certification.
- Farm level ownership for certification standards ideal.
- Language is a barrier as standards are not in local languages.
- Effective implementation of certification standards.
- Documentation can help prove social compliance.

SUSTAINABILITY REQUIREMENTS

- Multidimensional factors - Social, Environmental, Legal
- Support of all stake holders required.
- Influence of different factors vary from farm to farm and by location.
- Awareness of impact of farming operations.
- At minimum follow Good Aquaculture practices with:
  - Water usage and discharge
  - Usage of chemical inputs
  - Control of escapes

RECOMMENDATIONS

- Increasing Producer – Buyer engagement.
- Stakeholder involvement thru the entire Supply Chain.
- Responsibility for usage of resources.
- Leverage support from Government agencies like MPEDA and NaCSA.

RECOMMENDATIONS

- Group certification for better implementation of certification standards and reduced costs.
- Small farmers also be to actively engaged in the farming improvement programs.
- Leverage available technology for better farming operations.

COFFEE – AN EXAMPLE OF SUCCESS

~65% of global coffee production currently complies with a sustainability standard.

25 million+ smallholder farmers globally help produce more than 600 billion cups of coffee.

PURSUING SUSTAINABILITY – THIRD PARTY CERTIFICATIONS & CUSTOMERS

CONCLUDING NOTE

- Declining ocean catches.
- Aquaculture future seafood source.
- Sustainability responsibility of all stakeholders.
- Future Market (Millennials) prioritize food safety and sustainability.
- Changing weather patterns will challenge existing farming methods.

GOAL

October 2019

THANK YOU