Forum Udang Indonesia

Minutes of Meeting

Topic : The strategy on fulfilling brood stock requirement and nursery system development
Date : February 7, 2021
Time : 15.45 – 18.30 WIB
Location : https://us02web.zoom.us/
Attendees :

Budhi Wibowo	Pamudi
Yos Hardy	Haris Muhtadi
Agus Somamihardja	Harry Juli
Barry Amru	Gunawan Mulyono
Purnomo Hadi	Kenidas Lukman
Quraisy Adjadar	Retno Nuraini
Coco Kokarkin	Anna Maria
Sukenda	Sukenda
Bambang Widigdo	Rahmat Mulianda
Supito	Winarno

Notes :

- The session was opened by Coco presented the strategy for broodstock procurement in order to achieve the national shrimp production target. It is estimated that 270,000 female and 535,700 male broodstock required.
- Total broodstock that can be provided from each companies:
    - Kona Bay: 100,000 broodstock per year
    - API: 50,000 broodstock per year
    - Karang asem: 80,000
    - Syaqua: 80,000
    - Global gen: 60,000
- Ocean Institute Hawaii (OIH) establishes a joint venture with a private sector in Indonesia. OIH helps to design the nursery planning, yet it is not defined yet the species; Vannamei, merguensis, or monodon. That will be defined around this month.
- The importance of nursery system development in Indonesia
    - Helps to increase the SR, reduce the risk of disease outbreak, accelerate harvest, increasing the frequency of production cycle in a year
    - The development requires an SOP, that needs to include:
        - Location
            - Located close to growing farms
            - Water source used is available all the time
            - A good accessibility for transportation in and out
            - A maximum distance 20 minutes from the stocking farms

        - Nursery farm design
            - Rounded, square, raceway, raceway oval
        - Stocking density
        - Type of feed and the frequency of feed given
        - Harvest strategy and transporting method
    - Propose a National Nursery Program
        - Encourage SCI, PMI, traditional farmers, local government, national government, investors, private sectors to agree to support piloting national nursery program
- Waiso
    - Suggested that in terms of the national nursery program, it will need input from regional representatives
    - Success story with of a nursery program in Lampung is shown by Grup Maju Tambak Sumur
    - Broodstock multiplication center (BMC) in Indonesia: Japfa and Hendrix genetics
- Yosh
    - Konna bay, Hendrix genetic provides 3 types of broodstock
        - Speedline: high growth rate, intended for shrimp cultured at super intensive system that can control the environmental conditions,
        - Balance line: a more resistant to disease and fine growth rate, intended for shrimp cultured at super intensive and intensive system that cannot fully control the water quality and may still exposed by disease from the external factor
        - Strength line: higher resistance to disease and has a low growth rate, intended for shrimp cultured at the area with a high exposure to disease outbreak and usually shows a shorter day of culture/ conduct early harvest due to disease.
    - All types are developed from the specific pathogen free (SPF) brood stock into specific pathogen tolerance (SPT)
    - The brood stock multiplication center is at Hawaii, and the company is planning to build one in Indonesia. Previusly has been collaborating with Japfa for poultry.
- Haris
    - When it is ready for Indonesia?
    - What is the world market?
- Yosh
    - Total world brood stock supply from the company: 500,000 – Indonesia: 50,000
    - The BMC provides high size PL in January
    - BMC in Indonesia targeted to launch early 2022
    - Total broodstock import to Indonesia: 90,000 – 100,000 per year (from all broodstock provider; SIS, etc.)
- Agus Soma
    - The need to confirm to the new ministry on the national production target set, what is target recommend by FUI?

  - POKJA needs to push to the government in any way to support the process for increasing the shrimp production,
  - A clear task division between the governmental agencies and private sector to achieve the set target

Budhi

- Based on FUI calculation the realistic national production can be generated by 2024: 750,000 tons (domestic and export)
- 425,000 ton shrimp production may increase the value into 250%
- To achieve that requires brood stock provider commitment

Barry Amru, API

- API has carried out a webinar with farmers on brood stock discussion
- Established at 2016, entering Indonesia market at July 2020
- Committed to support Indonesia
  - Able to provide 50,000 broodstock/ year
  - To China: 3,500 brood stock/ month
  - Breeding center total production; 1,000,000/ year
- Provide high vigor and SPF certified shrimp
- DNA based genetic selection program
  - Family survival first, then growth
  - Genetic distance between families
  - Analysis of actual shrimp performance from actual pond environments
  - Out-breeding for greater hybrid diversity

Global gen:

- User feeback – a good PL performance
- Committed to support farming success
- Provide a domestic brood stock

Waiso

- 85% brood stock supply in Aceh provided by Global gen

Purnomo Hadi, Syaqua

- Using genomic selection for breeding program, higher accuracy compared to using phenotype method
- Why is it so difficult using genetic method ?
  - Low heritability
  - While using genomic selection shows better accuracy to show which one is more resistance to disease and not
  - Target in mi 2021 – launch brood stock product developed using genomic selection

- Research collaborates with Stirling University
  - Compared the ablated and non – ablated brood stock
  - Ratio required 1:3 – non ablated female shows slower rematuration
- Advice to Karang Asem
  - use genomic selection method and get the marker from field survey
  - collaborate with bioinformatics service provider
  - Note: the biosecurity is not well maintained yet
- Committed to support Indonesia
  - May provide 200,000 – 300,000 brood stock/ year
  - The average market price in Indonesia is relatively lower, so the companies are limited the supply allocation

Coco

- Brood stock providers have shown their commitment to support
- Then, how to support with the nauplii and Polychaeta production?

Quraisy, GlobalGen

- The company plans to establish nauplii center: Aceh and Sulawesi
- The market size will define its production capacity

Purnomo Hadi

- Strategy - using Polychaeta from other countries as a temporary solution, need to establish our own production for longer term
- Thailand owns a local Polychaeta production
  - It uses multilevel tub system

Waiso

- Need to confirm to Masykur:
  - The potential production of hatcheries in different area in Indonesia, and its market segmentation. The current information;
    - Aceh, Medan, Lampung: using imported brood stock
    - Situbondo: some farms are using nauplii produced from local brood stock growth, distributed to Tuban
    - Makasar: using nauplii produced from local brood stock grow-out
- Global gen, Syaqua, Karang Asem need to set up the nauplii production business, targeting traditional farms
- The demand for local brood stock: 200,000 brood stock per three to four months

Coco

- As reported by traditional farmers, the PL generated by local brood stock is quite similar in size therefore they are insisted to remain using it.

- Need to provide an alternatives PL with a lower price specifically for that segment
- Or, if purchasing brood stock from local farm grow-out/ backyard hatchery, there will need a representative from the quarantine agency to check the quality

Supito

- Karang asem provides brood stock for local brood stock production
- Target size 100-120
- Size maximum 10 – 12 gram; relatively resistance to disease, lower growth rate
- CPIP certified

Budhi

- In terms of backyard hatchery: if it is too expensive to buy from the importir, is that possible to set a regulation that farmers are allowed to get the product from Balai?

Bambang

- It depends on whether the quality of PL originated from backyard hatcheries has whos a similar quality to the F1/F2 brood stocks. It is still questionable.