

***PROPOSAL FOR A NEW CROP
CALENDAR SYSTEM 2012***



CROP CALENDER – GOALS

- **Increase the Prawn Production and Exports**
- **Continues Production of Bigger Size Prawns throughout the Year.**
- **Reduce the Disease Outbreaks Esp. WSSV**
- **Provide Due Opportunities for Big and Small Farmers with their Operational Capabilities**
- **Provide Opportunities for the Technical and Management Improvements in Prawn Culture Industry in Sri Lanka.**

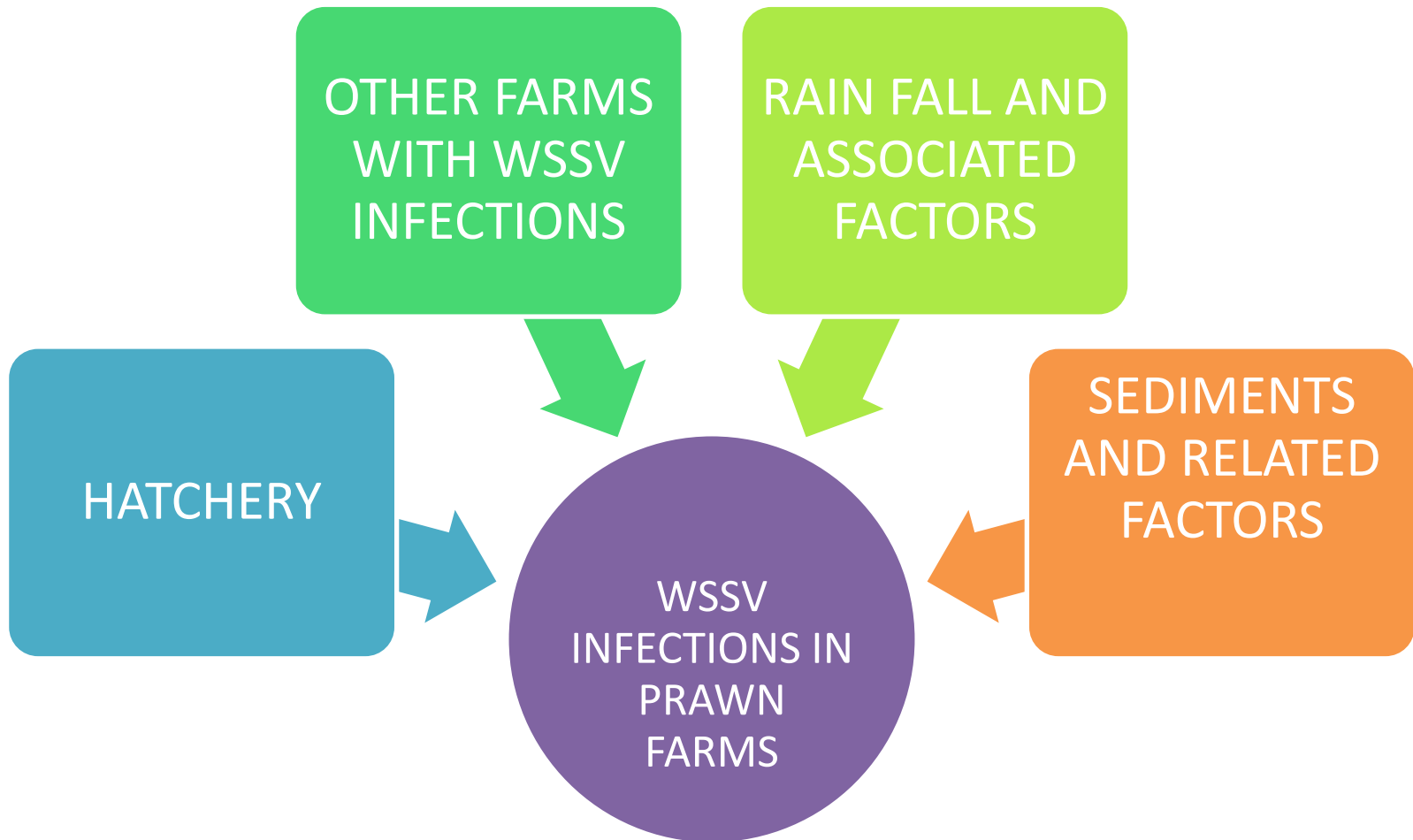
CROP CALENDER – PRESENT COMPLAINTS

- 1. Continues Supply of Quality PLs are not available to Stock the Ponds during the favorable Period due to unplanned Hatchery Common Shut downs.**
- 2. Sub Zone Farmers are pushed with pre planned dates for stocking even though there are adverse conditions for stocking**
- 3. There are no incentive or recognition for the large Operators and New Investors.**
- 4. No space or encouragement for any Technical Improvements.**
- 5. No Continues Supply of Prawns to Export Market.**

HOW TO OVERCOME THE PRESENT SHOTCOMMINGS OF CROP CALENDER SYSTEM

- ZONING TO BE RE ANALYZED
- RE DESIGN THE FARMING SYSTEM
- RE DESIGN THE HATCHERY SYSTEM
- DESIGNING THE STOCKING PROGRAM
- IMPLIMENTING BMP'S
- IMPROVING THE MONITORING PROGRAM

WSSV DISEASE – SOURCES AND FACTORS INDUCING INFECTIONS



PRAWN HATCHERY

- Prawn Hatchery is the No 1 source of WSSV infections if not properly Managed.
- Hatchery Cycle should be planned to provide disease free Healthy Post Larvae throughout the year to the Prawn Farming Sector
- Hatchery Cycles should be planned to suit the Crop Calendar. (Not to Plan the other way – Crop Calendar is prepared to match the Hatchery Cycle)

OTHER FARMS WITH WSSV INFECTIONS

- One of the Major factors in WSSV disease Infections.
- It can be prevented through
 - Proper implementation of BMPs
 - Proper Zoning of the Farming Area considering the sources and Disease inducing agents
 - Proper Planning of Crop Calendar between Zones

RAIN FALL AND ASSOCIATED FACTORS

- Rain Fall will induce the following factors which aggravate WSSV disease infections.
 - Salinity Fluctuations
 - Water pH Fluctuations
 - Water Temperature Fluctuations
 - Reduced DO Levels
 - High Ammonia Content
 - High Vibrio Counts

So the Farming Systems should be designed to minimize the above fluctuations.

Crop Calendar Should be planned to avoid the above unfavorable Periods

SEDIMENTS AND RELATED FACTORS

- High loads of Sediments during the Dry Season are also aggravating the WSSV disease as Rainy Periods.

Farming System should be designed to cope up with the fluctuation of Disease aggravating factors due to High Sediments

Avoid the Farming during the High Sediment Period through Proper Crop Calendar Plan

**FARMING AREA
of the NWP is Divided in
to
FIVE ZONES
with the Levels of WSSV
Inducing Factors**

PRAWN FARM OPERATIONAL ZONES

ZONE 1	ZONE 2	ZONE 3	ZONE 4	ZONE 5
NEGOMBO TO CHILAW	CHILAW TO UDAPPUWA	UDAPPUWA TO PALAVIYA	PALAVIYA TO KALPITIYA	PUTTALAM TO WANATHAWI
Negombo/Waik	Bangadeniya	Poonaip/Wattaw	Karambe	Sevantivu
Thalwilla	Kusala/Kottage	Kotantivu	Mampuri/Ethala	Manativu
Madampe	Wairankattuwa	Mangalaeliya	Puwarasakuda	Annakutti/Malay
Thoduwawa/Irra	Bohawitiya	Madurank South		Mee Oya
Kakkapalliya	Naguleliya	Madurank/Semb		Wadathamu/Sam
Ambakkandawila	Muthupanthiya	Pulithiwayal		Wanathawilluwa
Marawilla/Sudu	Pinkattiya	Palaviya		
Wattakalliya/Jaya	Pulichakulam			
	Udappuwa			

LEVEL OF DISEASE INDUCING FACTORS IN DIFFERENT ZONES

Period	Zone 1	Zone 2	Zone 3	Zone 5	Zone 5
January	LOW	LOW	LOW	LOW	LOW
February	LOW	LOW	LOW	LOW	LOW
March	LOW	LOW	LOW	LOW	LOW
April	LOW	LOW	MEDIUM	MEDIUM	MEDIUM
May	LOW	LOW	MEDIUM	MEDIUM	MEDIUM
June	LOW	LOW	MEDIUM	MEDIUM	MEDIUM
July	MEDIUM	MEDIUM	HIGH	HIGH	HIGH
August	MEDIUM	MEDIUM	HIGH	HIGH	HIGH
September	MEDIUM	MEDIUM	HIGH	HIGH	HIGH
October	HIGH	HIGH	LOW	LOW	LOW
November	HIGH	HIGH	LOW	LOW	LOW
December	HIGH	HIGH	LOW	LOW	LOW

**FARMING SYSTEMS
of the NWP is Divided in
to
THREE
with the Levels of WSSV
Inducing Factors**

GRADING OF PRAWN FARMERS IN TO THREE FARMING SYSTEMS

- **GRADE A – CLOSED SYSTEM**
- **GRADE B – SEMI CLOSED SYSTEM**
- **GRADE C – OPEN SYSTEM**

GRADE A – CLOSED SYSTEM

- **No water released to the Natural Water Body.**
- **Availability of Disinfection Facilities**
- **Probiotic Culture to maintain water quality**
- **Aerators**
- **Technical Manager and Technician in the Farm site**
- **Laboratory Facilities**

GRADE B – SEMI CLOSED SYSTEM

- **Limited release of water to the Natural Water Body.**
- **Less Water Usage.**
- **Aeration**
- **Probiotic Usage.**
- **Technical Advisor or Technician**

GRADE C – OPEN SYSTEM

- **Aeration or without aeration**
- **No Disinfection Facilities before stocking**
- **No Probiotic**
- **No Technician or Technical Advisors**

LEVEL OF RISK FACTORS IN DIFFERENT FARMING SYSTEMS

PARAMETERS	OPEN SYSTEM	SEMI CLOSED SYSTEM	CLOSED SYSTEM
Salinity Fluctuations	High	Low	Very Low
pH Fluctuation	High	Medium	Low
Temp. Fluctuation	High	Low	Low
Reduced DO	High	Low	Low
Ammonia Content	High	Low	Low
Vibrio Counts	High	Low	Low
Sediments	High	Medium	Low

PRAWN FARM OPERATIONAL PROGRAM

PERIOD	ZONE 1	ZONE 2	ZONE 3	ZONE 4	ZONE 5
JANUARY	Favorable	Favorable	Favorable	Favorable	Favorable
FEBRUARY	Favorable	Favorable	Favorable	Favorable	Favorable
MARCH	Favorable	Favorable	Favorable	Favorable	Favorable
APRIL	Favorable	Favorable	Risk	Risk	Risk
MAY	Favorable	Favorable	Risk	Risk	Risk
JUNE	Favorable	Favorable	Risk	Risk	Risk
JULY	High Risk	High Risk	High Risk	High Risk	High Risk
AUGUST	High Risk	High Risk	High Risk	High Risk	High Risk
SEPTEMBER	High Risk	High Risk	High Risk	High Risk	High Risk
OCTOBER	High Risk	High Risk	Favorable	Favorable	Favorable
NOVEMBER	High Risk	High Risk	Favorable	Favorable	Favorable
DECEMBER	High Risk	High Risk	Favorable	Favorable	Favorable



HIGH RISK PERIOD



RISK PERIOD



FAVORABLE PERIOD

STOCKING PROGRAM

Open System Farmers should ONLY be allowed to stock within the favorable period (Green Zone of Six Months).

The Stocking Period can be maximum TWO Months out the SIX Months

STOCKING PROGRAM

Semi Closed System Farmers can be allowed to Stock during the Risk Period of Three Months (Yellow Zone) in addition to the Favorable Period (Green Zone).

The Maximum Stocking Period During the Risk Period is ONE Month out of THREE Months.

STOCKING PROGRAM

**CLOSED SYSTEM FARMERS
ARE ALLOWED TO STOCK
AT ANY TIME EXCEPT HIGH
RISK PERIOD (RED ZONE)**

STOCKING PROGRAM

NO FARMERS WILL BE ALLOWED TO STOCK DURING THE HIGH RISK PERIOD OF THREE MONTHS (RED ZONE)

(Periods shown as Favourable, Risk and High Risk periods in the above chart can be adjusted + or – 15 days depending on the Climatic and Environmental Variations in that particular sub zone)

STOCKING PROGRAM

- **Nursery System can be allowed for Semi Closed System and Closed System Farmers**
- **Stocking Periods for Open System and Semi Closed System Farmers during the favorable period can be decided by Sub Zonal Associations with the concurrence of NAQDA.**
- **Stocking Periods for Semi Closed System Farmers during the Risk Period can be decided by Members of Semi Closed System Farmers with the concurrence of their particular Association and NAQDA.**

STOCKING PROGRAM

- **By any Chance if the Open System Farmers FAIL to Stock during the Favorable Period they will not be allowed to during Risk and Highly Risk Periods.**
- **Same way Semi Closed System Farmers also will not be allowed to stock during the High Risk Period if they Fail to Stock during the Risk Period.**
- **All the Farmers should follow BMP,s**

NWP STOCKING PROGRAM AND PL REQUIREMENTS

PERIOD	ZONE 1	ZONE 2	ZONE 3	ZONE 4	ZONE 5	NWP
JANUARY						30
FEBRUARY						40
MARCH						35
APRIL						10
MAY						20
JUNE						10
JULY						12
AUGUST						16
SEPTEMBER						14
OCTOBER						25
NOVEMBER						50
DECEMBER						25
TOTAL						287

SHRIMP HATCHERY GRADING

- All Shrimp Hatcheries in NWP should be graded as A, B & C according to the standards
- A grade Hatcheries can be allowed to operate the hatchery freely with two optional shut downs per year.
- B grade Hatcheries will have to go for one common shut down per year in addition to two optional shutdowns.
- C grade Hatcheries will have to go for two common shut downs per annum.
- C grade Hatcheries will not be allowed to sell Post Larvae for the farmers who is stocking their ponds during risk periods.

HATCHERY OPERATIONAL PROGRAM

- **NAQDA will have to Monitor the quality of the PL's supplied by the Hatcheries. In the event a Hatchery is found with higher percentage of poor quality PL,s that hatchery should be asked to go for a Shutdown immediately.**
- **Hatcheries with Brood Stock Holding facilities should be allowed to hold the Broodstock throughout the year even during the Shutdown Periods.**
- **Hatcheries should be allowed to Import High Quality Broodstock from Abroad**

ZONE 1 – NEGOMBO TO CHILAW

SUB ZONE	NO OF FARMS	NO OF PONDS	PL REQD/CROP (Millions)	PRODN/CROP
THALWILLA	2	8	0.5	8.0
MADAMBE	8	62	4.5	60.0
THODU/IRANA	16	58	4.0	50.0
KAKKAPALLIYA	4	12	1.0	15.0
AMBAKANDA	12	42	4.0	40.0
MARAWA/SUD	13	102	6.0	50.0
WATTAK/JAYAB	11	38	3.0	40.0
NEGOMB/WAI	6	17	1.5	15.0
TOTAL	72	339	24.5	278.0

ZONE 2 – CHILAW TO UDAPPUWA

SUB ZONE	NO OF FARMS	NO OF PONDS	PL REQD/CROP (Millions)	PRODN/CROP (MT)
BANGADENIYA	13	238	20.0	350.0
KUSALA/KOTA	26	152	9.0	200.0
WAIKANKATTU	14	88	10.0	150.0
BOGAHAWITIT	7	23	1.5	25.0
NAGULELIYA	6	28	2.0	30.0
MUTHUPANTHI	65	145	10.0	125.0
PINKATTIYA	87	265	15.0	250.0
UDAPPUWA	56	144	15.0	250.0
PULICHAKU	25	129	7.0	100.0
TOTAL	299	1212	89.5	1480.0

ZONE 3 – UDAPPUWA TO PALAVIYA

SUB ZONE	NO OF FARMS	NO OF PONDS	PL REQD/CROP (Millions)	PRODN/CROP (MT)
MUNDA/KEERA	35	105	6.0	80.0
POONAI/WATT	32	112	10.0	150.0
KOTANTIVU	11	51	4.0	60.0
MANGALAEELIY	22	85	7.0	100.0
MADURA SOU	24	108	10.0	150.0
MADUAN/SEM	6	38	4.0	50.0
PULITHIVAYAL	6	34	3.0	40.0
TOTAL	136	533	44.0	630.0

ZONE 4 – PALAVIYA TO KALPITIYA

SUB ZONE	NO OF FARMS	NO OF PONDS	PL REQD/CROP (Millions)	PRODN/CROP (MT)
KARAMBE				
MAMPURI/ETH				
PUWARASAK				
TOTAL	28	190	12.0	100.0

ZONE 5 – PUTTALAM TO WANATHAWILLUWA

SUB ZONE	NO OF FARMS	NO OF PONDS	PL REQD/CROP (Millions)	PRODN/CROP (MT)
SEVANTIVU	18	105	10.0	150.0
MANATIVU	18	106	12.0	200.0
ANNAIKU/MAL	12	94	12.0	200.0
MEE OYA	4	16	2.0	30.0
WADATHA/SAMAGI	7	76	7.5	100.0
WNATHAWILLUWA	2	6	0.5	10.0
TOTAL	61	403	44.0	690.0

NWP - ZONAL INFORMATION SUMMURY FOR ONE CROP

AREA	NO OF FARMS	NO OF PONDS	PL REQD/CORP (Millions)	PRODN/CROP (MT)
ZONE 1	72	339	24.5	278.0
ZONE 2	299	1212	89.5	1480.0
ZONE 3	136	533	44.0	630.0
ZONE 4	28	190	12.0	100.0
ZONE 5	61	403	44.0	690.0
TOTAL	596	2677	214.0	3178.0

NWP - ZONAL INFORMATION FOR ONE YEAR

PERIOD	ZONE 1	ZONE 2	ZONE 3	ZONE 4	ZONE 5	PL'S (Mn)	PRODN (MT)
JANUARY						30	300
FEBRUARY						40	450
MARCH						35	400
APRIL						10	320
MAY						20	400
JUNE						20	650
JULY						15	550
AUGUST						10	350
SEPTEMBER						14	350
OCTOBER						25	350
NOVEMBER						43	250
DECEMBER						25	100
TOTAL						287	4470

THANK YOU

