



DEVELOPMENT OF an ECONOMICALLY SUSTAINABLE SHRIMP FARMING SYSTEM FOR TURKEY

5 April 2017

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TSC SHRIMP & FISH R&D COMPANY

THE CRUSTACEAN SPECIES WE HAVE STUDIED So Far in TURKEY



WE HAVE BEEN THE ONLY TEAM in Turkey
CONSISTENTLY DOING **R&D ON SHRIMP**
CULTURE OVER THE PAST 27 YEARS

- ✧ Maturation and Spawning Under Subtropical Conditions
- ✧ Larvae Culture Techniques
- ✧ Nurse Culture
- ✧ Pond Growout Techniques
- ✧ RAS Growout Techniques
- ✧ Improving Husbandry of Shrimps

WE ALSO STUDIED OTHER CRUSTACEANS;
(non-indigenous species)

- ❖ The Giant Freshwater PRAWN;
Macrobrachium rosenbergii
- ❖ The Red Claw Crayfish; *Cherax quadricarinatus*

Penaeus semisulcatus



Penaeus japonicus



Metapenaeus monoceros



Penaeus kerathurus





The Giant FW PRAWN grown from PL stages to Marketable Size in OPEN EARTHEN PONDS in Southern Part of TURKEY between JULY and NOVEMBER, 2007)

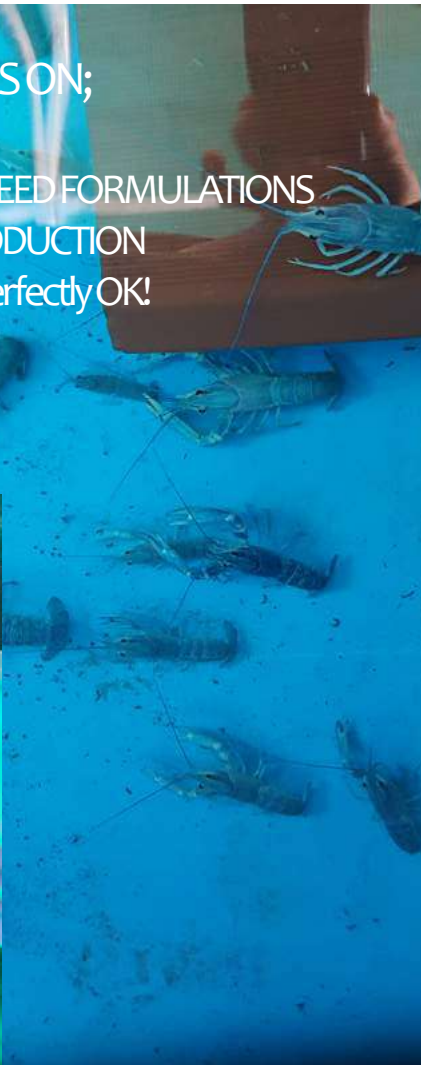




The **Red Claw Crayfish** (*Cherax quadricarinatus*) farmed in
Çukurova Region in southern part of Turkey in
CONCRETE PONDS at High Density (40-50 pieces/m²)

WE RUN SOME TRIALS ON;

- ❖ DEVELOPMENT OF FEED FORMULATIONS
- ❖ CONTROL OF REPRODUCTION
- ❖ 0-10% FISH MEAL is perfectly OK!



WHERE ARE WE BASED in TURKEY?



What is the CLIMATE like;

- ✧ AMBIENT WATER TEMPERATURE BETWEEN APRIL & NOVEMBER (6-7 MONTHS) is 21-34°
- ✧ WINTER MONTHS (<9-20°C)
- ✧ WITH SIMPLE GREENHOUSES, GROWOUT PERIOD CAN BE EXTENDED TO 9-10 MONTHS WITHOUT MUCH HEATING EXPENDITURE

WHAT ARE THE CURRENT AQUACULTURE ACTIVITIES in TURKEY

- ❖ Began in the mid 1970's with Freshwater Fish (**carp & trout**) and early 1980's with marine fish (**sea bass & sea bream**), the aquaculture sector has achieved a remarkable expansion since the year 2000's.



- ❖ The Current Aquaculture Production Reached **240,334 tons by 2015**
- ❖ The country ranks No 1 in **TROUT** (100.411 tons) and **SEA BASS** (75.164 tons) & Number 2 in **SEA BREAM** (51.844 tons) Productions in Europe
- ❖ However, **BIVALVES & CRUSTACEANS** FARMING have been neglected so far.

PAST, CURRENT & FUTURE PROSPECTIVES OF SHRIMP FARMING IN TURKEY

In the Early 1990's Two Shrimp Farms Attempted SHRIMP FARMING IN TURKEY

THESE FARMS USED; 1) **THE GREEN TIGER SHRIMP** (*Penaeus semisulcatus*),
2) **KURUMA SHRIMP** (*Penaeus japonicus*) &
3) **BLACK TIGER SHRIMP** (*Penaeus monodon*)

THESE ATTEMPTS FAILED DUE TO VARIOUS REASONS;

- **Insufficient KNOW-HOW AND EXPERTISE**
- **INADEQUATE FARMING STRATEGIES** suitable for sub-tropical regions
- **POOR MARKETING OPPORTUNITIES**
- **INADEQUATE SHORT AND LONGTERM TARGETS** (e.g. marketing live shrimps to Japan)
- Targeting **ONLY One CROP PER YEAR**
- Using **OPEN earthen PONDS ONLY IN THE PRODUCTION** (1 to 10 ha each) ...

✧ THE LAST ATTEMPT WAS MADE IN 2007, AGAIN IN OPEN EARTHEN PONDS

✧ That FARM (26.1 ha) IMPORTED 1 MILLION PL's from THAILAND AND PRODUCED 5-6 TONS for A TRIAL PRODUCTION (5 Months)

✧ THIS FARM were SHOT DOWN after the trial production DUE TO FINANCIAL & MANAGERIAL ISSUES

Since then, WHAT HAVE WE DONE AS R&D STUDIES FOR SUCCESSFUL SHRIMP FARMING IN TURKEY?

- Over the last decade, our team has **COMPLETED most of the R&D STUDIES** with the green tiger shrimp & Pacific white shrimp **UNDER LOCAL CONDITIONS**
- **THE TECHNOLOGY SUITABLE FOR FARMING UNDER TEMPERATE CONDITIONS HAVE BEEN TESTED AND REFINED** (*use of greenhouses, underground waters, maturation of broodstock all year round, developing low-cost feeds, refining indoor farming TECHNOLOGY etc.*)
- Our R&D results and efforts forced the **MINISTRY OF AGRICULTURE** to declare **shrimp as alternative COMMODITY to be farmed in the country.**
- **The PERMIT to grow Pacific white shrimp has FINALLY BEEN OFFICIALLY GRANTED by the Ministry to us but only in RAS SYSTEMS just two weeks ago!**
- **WE ARE HOPING TO START FARMING PACIFIC WHITE SHRIMP IN 2017/2018 season**





WHITE SHRIMP vs GREEN TIGER SHRIMP



We have studied all farming aspects of the green tiger shrimp, ie. MATURATION, SPAWNING, LARVAE CULTURE, NURSERY, GROWOUT, FEEDS & FEEDING, HUSBANDRY since 1995 (WHITE SHRIMP as well)

GREEN TIGER:

- Working with over 20 years
- Slow grower (5-6 months)
- FCR $2 >$
- Final Survival ($< 70\%$)
- Heavy Cannibalism
- Not being Commercialised yet
- **Breeding Program** is needed
- Yield: < 1 kg per m^2
- Fetch High Price Locally

WHITE SHRIMP:

- Fast Growing Species (3.5-4 months)
- SPF/SPR Broodstock Available
- FCR < 1.5
- Survival ($> 70\%$)
- Low Cannibalism
- Can be Grown Successfully on Hard Substrates
- Yield: 2-12 kg per m^2
- 2-3 crops/year is possible

A photograph of a fisherman on the deck of a boat, wearing a grey long-sleeved shirt and dark trousers, working with a large, dark-colored fishing net. The net is piled with a large quantity of shrimp. The boat's deck is cluttered with various fishing equipment, including yellow and white ropes and a large coil of thick rope. The background shows the blue sea and a clear sky. A semi-transparent text box is overlaid on the upper part of the image.

**HOW DO WE MANAGE R&D STUDIES WITH LOCAL
SHRIMPS (*Penaeus semisulcatus*)**

**WE PURCHASE THE BROODSTOCK
FROM FISHERMAN (THE MED. SEA)**

GREEN TIGER SHRIMP



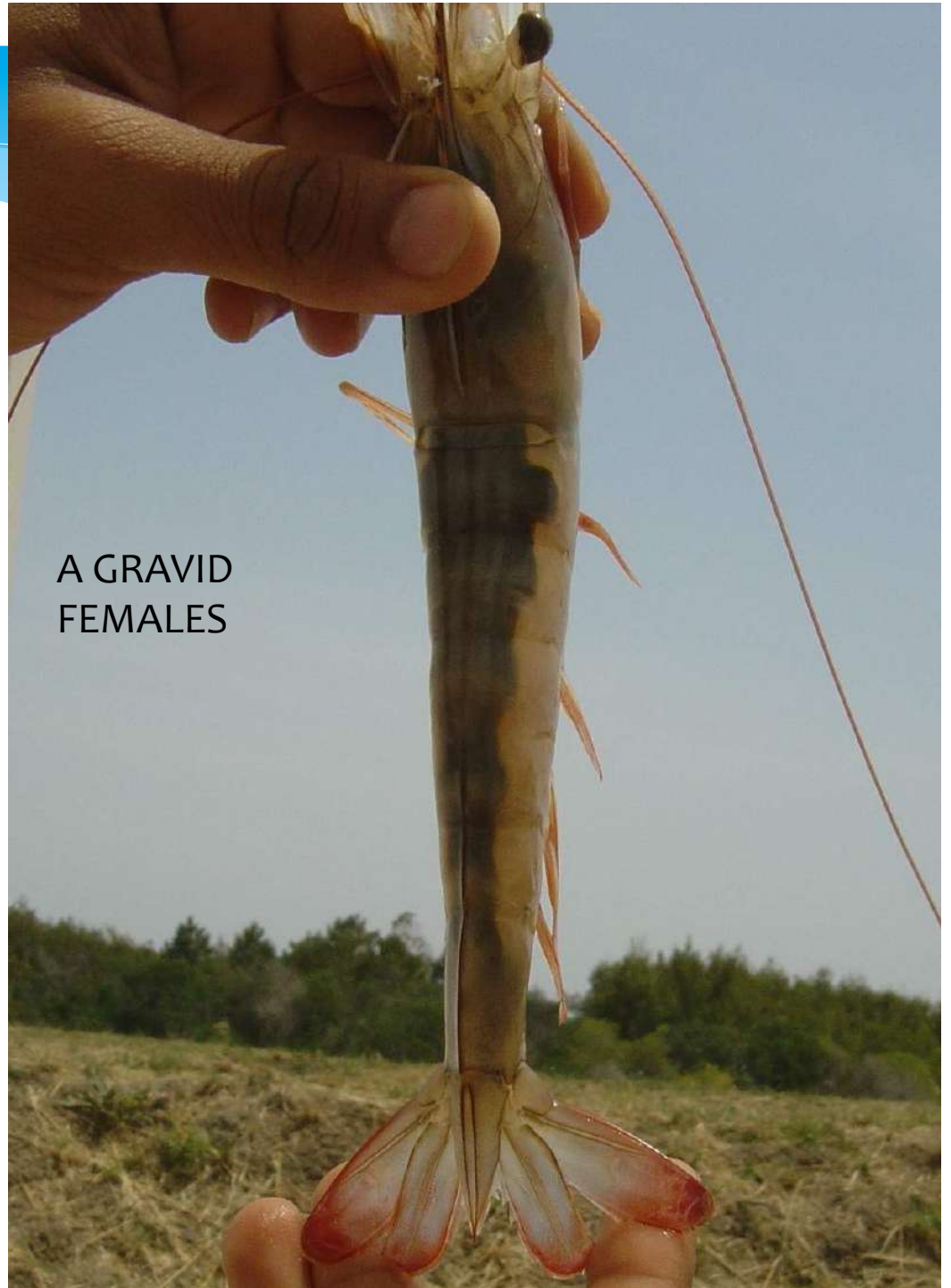
GREEN TIGER BROODSTOCK



RAS MATURATION
TANK SYSTEM

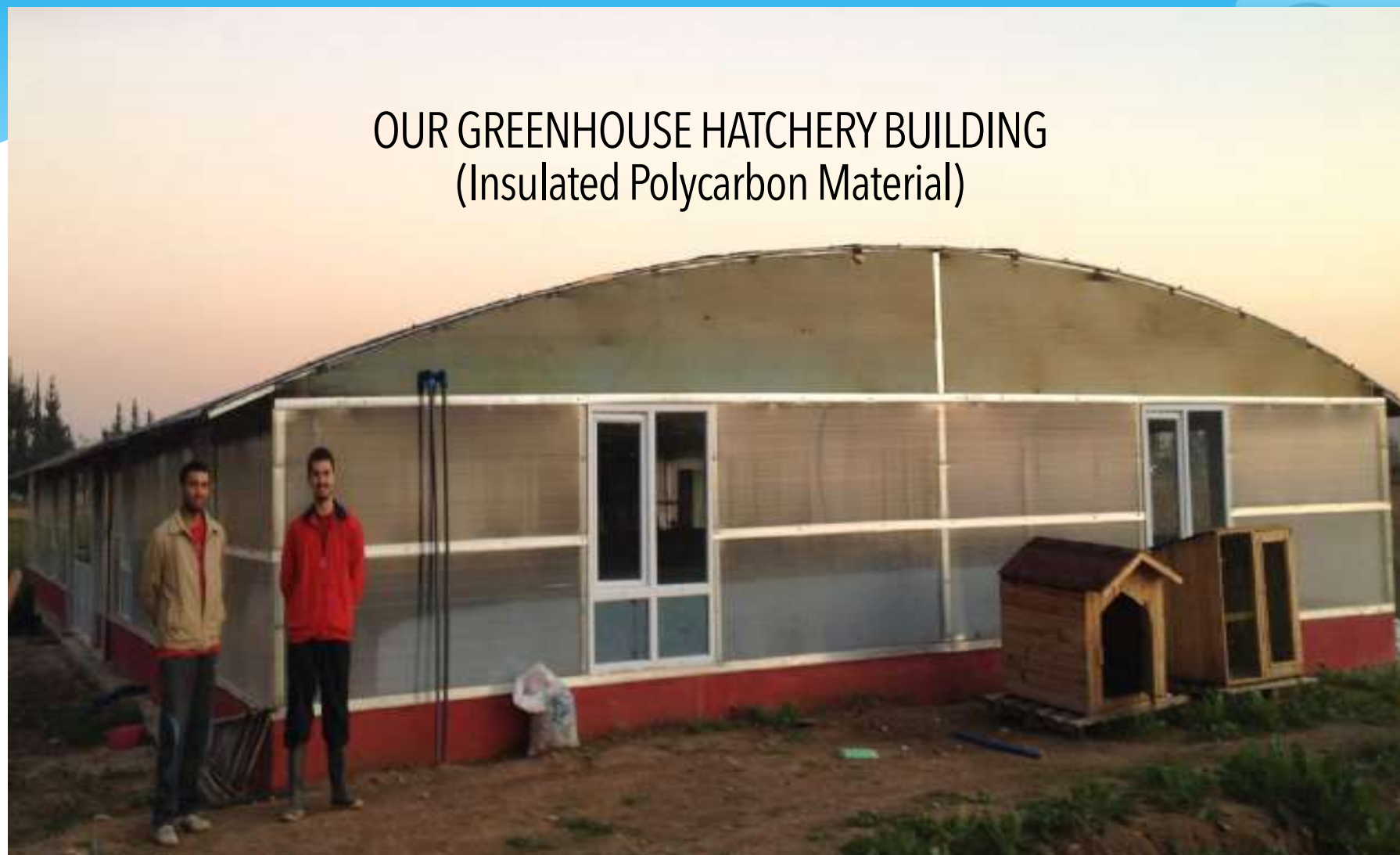
MATURATION TANK

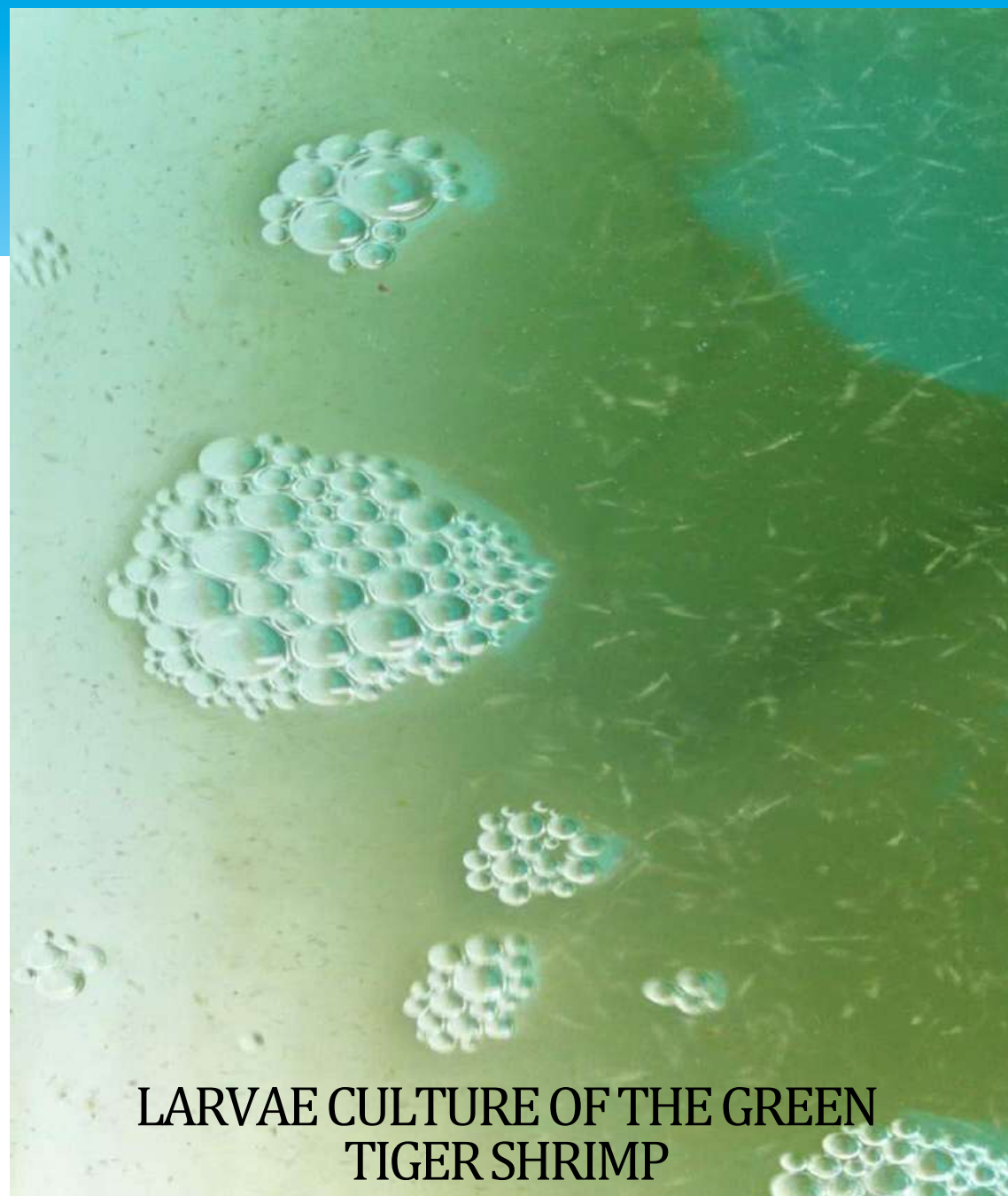




A GRAVID
FEMALES

OUR GREENHOUSE HATCHERY BUILDING (Insulated Polycarbon Material)





LARVAE CULTURE OF THE GREEN
TIGER SHRIMP

NURSERY OF THE GREEN TIGER SHRIMP



INTENSIVE GROWOUT OF THE GREEN TIGER SHRIMP



*SEVERAL PROJECTS HAVE BEEN GRANTED TO
OUR TEAM MORE RECENTLY*



By
Ministry of Agriculture
Research & Technological Council of TURKEY



**NEW R&D PROJECT to test vertically
STACKED TANK & SOLAR SYSTEM INTEGRATION**



KATLI TANK SİSTEMİNİN TAMAMLANMASI

İP1 ve İP2: Deneme Ünitelerinin Hazırlanması



SOLAR PANEL SİSTEMİNİN KURULUMU

FEEDS & FEEDING STUDIES FOR THE GREEN TIGER SHRIMP

- ✧ WE HAVE **DEVELOPED FEW NEW FEED FORMULATIONS** FOR THE SPECIES
- ✧ THE SPECIES PERFORM WELL WITH FEEDS CONTAINING **10% OR EVEN 0% FISH MEAL**
- ✧ THE COST OF FEED CAN BE LOWERED TO **1.2 US DOLLAR** (vs 2.12 US dollar 2mm commercial feed)
- ✧ WITH **SUBSTRATES**, SURVIVAL CAN BE RAISED TO OVER 70% IN TANKS
- ✧ BUT, STILL **GROWTH IS SLOW** AT HIGH DENSITIES
- ✧ STILL TESTING THE USE OF **PROBIOTICS** THIS SUMMER TO HOPEFULLY IMPROVE GROWTH





**TESTING NEW FEED FORMULATIONS FOR THE GREEN
TIGER SHRIMP**





GREEN TIGER SHRIMP

GROWTH DRAMATICALLY DROPS
WITH SHRIMP DENSITY

FINAL WEIGHT
(NOV 2014)

40 shrimp/m²: 18.5 g
80 shrimp/m²: 12.80 g
120 shrimp/m²: 11.47 g

ÇİZELGE 4.1. Deneme süresince (Haziran – Kasım 2014) ölçülen su parametreleri. Her değer bir ortalama $\pm$ standart sapmayı göstermektedir.

WATER PARAMETERS

BÜYÜTME DENEMESİ

AYLAR (2014 yılı)	Sıcaklık (°C)	Tuzluluk (‰)	Toplam Amonyak (mg/L)	Nitrit (mg/L)	Nitrat (mg/L)	pH
Haziran	29.32 $\pm$ 0.38	22.70 $\pm$ 0.47	0.16 $\pm$ 0.12	0.30 $\pm$ 0.00	13.30 $\pm$ 5.77	8.35 $\pm$ 0.07
Temmuz	31.82 $\pm$ 0.63	20.87 $\pm$ 0.92	0.15 $\pm$ 0.21	0.35 $\pm$ 0.20	30.00 $\pm$ 18.80	8.30 $\pm$ 0.15
Ağustos	31.84 $\pm$ 0.58	21.32 $\pm$ 0.83	0.02 $\pm$ 0.14	0.40 $\pm$ 0.12	20.00 $\pm$ 0.00	7.80 $\pm$ 1.12
Eylül	29.53 $\pm$ 0.84	21.67 $\pm$ 0.76	0.50 $\pm$ 0.12	0.50 $\pm$ 0.02	60.00 $\pm$ 0.10	8.20 $\pm$ 0.11
Ekim	27.90 $\pm$ 0.40	20.00 $\pm$ 0.09	0.40 $\pm$ 0.17	1.10 $\pm$ 0.85	20.00 $\pm$ 0.00	7.97 $\pm$ 0.15
Kasım	25.35 $\pm$ 1.07	21.90 $\pm$ 1.47	0.40 $\pm$ 0.14	0.75 $\pm$ 0.35	40.00 $\pm$ 0.13	7.85 $\pm$ 0.07

ÇİZELGE 4.2. Deneme sonunda ölçülen gruplardaki karideslerin ortalama ağırlıkları hesaplanan günlük büyüme oranı (GBO), spesifik büyüme oranları (SBO, %/gün) ve yem çevrim oranı (YÇO) ve yaşama oranları.

GROWTH PARAMETERS

GRUPLAR	Deneme Sonu Ağırlığı (g)	GBO (g/gün)	SBO (%/gün)	YÇO	Yaşama Oranı (%)
40 adet/m ²	18.50 $\pm$ 2.35 ^a	0.10	2.52	2.97 $\pm$ 0.56 ^a	28.00 $\pm$ 6.80
80 adet/m ²	12.80 $\pm$ 1.88 ^b	0.07	2.31	3.12 $\pm$ 0.75 ^a	25.00 $\pm$ 4.75
120 adet/m ²	11.47 $\pm$ 2.13 ^b	0.06	2.25	3.58 $\pm$ 0.43 ^a	22.30 $\pm$ 8.25



**1ST TRIAL PRODUCTION OF VANNAMEI IN TURKEY
IN OPEN EARTHEN PONDS (2007)**

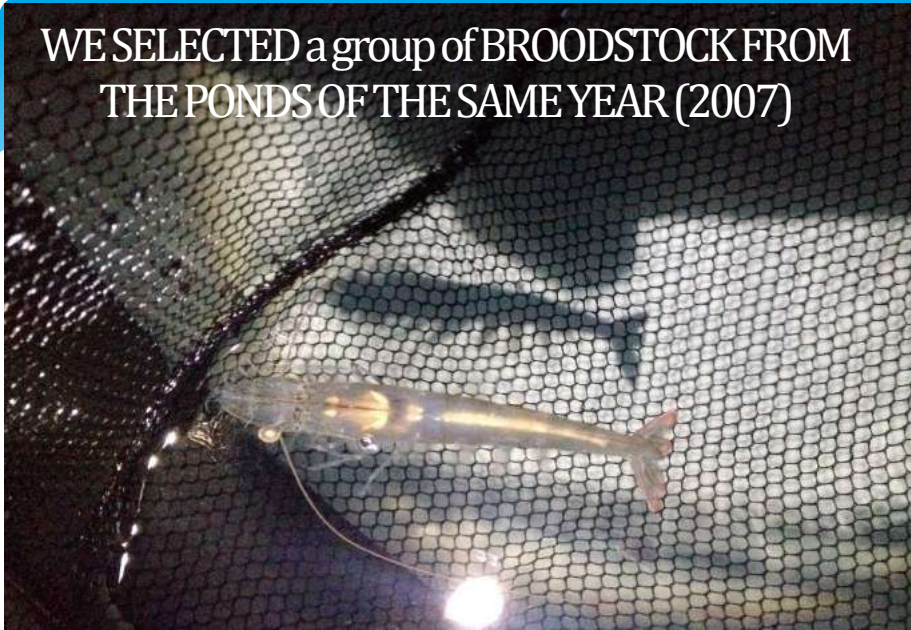




**SELECTED BROODSTOCK
FROM THE PONDS**



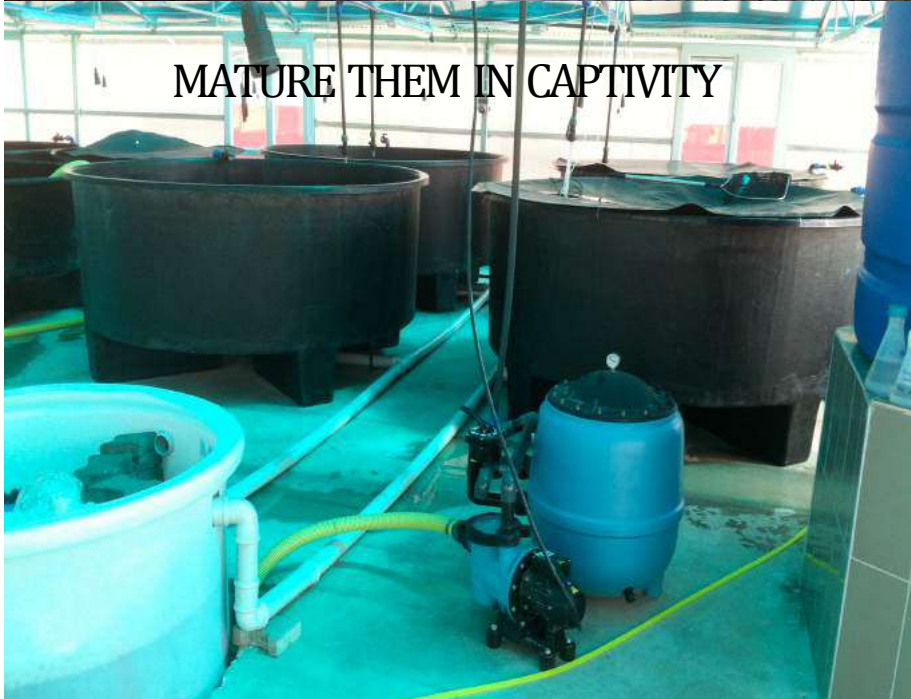
WE SELECTED a group of BROODSTOCK FROM
THE PONDS OF THE SAME YEAR (2007)



GREW THEM TO PL&JUVENILE STAGES



MATURE THEM IN CAPTIVITY



LARVAL CULTURE OF THE WHITE SHRIMP AT OUR PREMISES



TRIALS ON INDOOR RAS WHITE SHRIMP CULTURE



LARVAL CULTURE TANKS



GROWOUT TANKS



NURSERY RAS UNIT

AN INDOOR GROWOUT TANK FOR WHITE SHRIMP

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PACIFIC WHITE SHRIMP

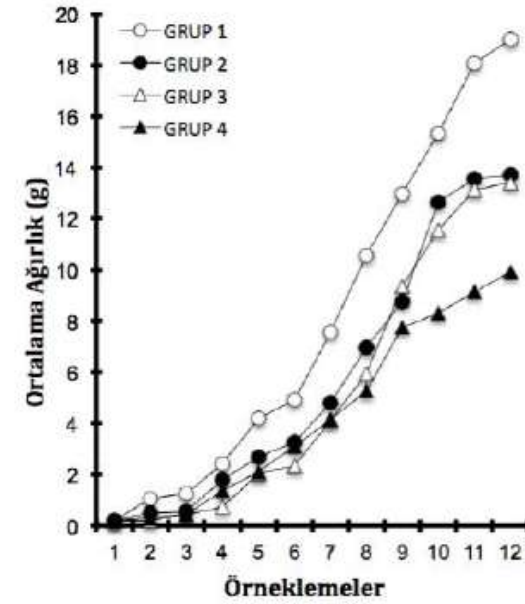
HARVEST TIME



ÇİZELGE 4.8. Büyütme denemesi sonunda stoklama gruplarında elde edilen final ağırlığı, yaşama oranı ve hesaplanan bazı performans parametreleri.

GROWTH PARAMETERS

Performans Parametreleri	GRUP 1	GRUP 2	GRUP 3	GRUP 4
Final Ağırlığı (g)	19.01±1.57 ^a	13.71±2.08 ^b	13.39±1.23 ^b	9.92±2.31
Yaşama Oranı (%)	70.40±5.25 ^a	64.87±6.24 ^b	55.35±2.78 ^c	48.65±7.20
SBO (%/gün)	2.53	2.35	2.34	2.17
HBO (g/hafta)	0.73	0.53	0.51	0.38
YÇO	1.94	2.15	2.38	3.19
Üretim Miktarı (kg/m ²)	1.34	1.34	1.48	1.93



ŞEKİL 4.17. Pasifik beyaz karidesinde, altı ay süren büyüme denemesinde elde edilen canlı ağırlık artış eğrileri.



ŞEKİL 4.16. Altı ay süren büyüme periyodu sonunda Pasifik beyaz karidesinde elde ettiğimiz ürünün görüntüsü.



ŞEKİL 4.18. Proje kapsamında yürütülmüş olan çalışmamızda büyüme periyodu nunda hasat edilmekte olan Pasifik beyaz karidesleri.



ŞEKİL 4.15. Bu proje kapsamında tesislerimizde yumurtadan itibaren büyütülmüş olan bir Pasifik beyaz karidesi.

ÇİZELGE 4.7. İlk stoklama tarihinden itibaren 30 Kasım 2015'e kadar büyütülen Pasifik beyaz karideslerinde ömekleme tarihleri bazında canlı ağırlık artışı. Her değer bir ortalama $\pm$ standart sapmayı göstermektedir. Aynı satırda farklı harflerle

GROWTH AT DIFFERENT STOCKING DENSITIES

Ömekleme Tarihleri	Ay (2015 yılı)	GRUP 1 (100 adet/m ²)	GRUP (150 adet/m ²)	GRUP 3 (200 adet/m ²)	GRUP 4 (400 adet/m ²)
İlk Stoklama		0.2 $\pm$ 0.05 ^a	0.2 $\pm$ 0.05 ^a	0.2 $\pm$ 0.05 ^a	0.2 $\pm$ 0.05
4. Hafta	Haziran	1.06 $\pm$ 0.4 ^a	0.5 $\pm$ 0.24 ^b	0.20 $\pm$ 0.07 ^c	0.3 $\pm$ 0.14
6. Hafta	Temmuz	1.25 $\pm$ 0.87 ^a	0.56 $\pm$ 0.40 ^b	0.45 $\pm$ 0.28 ^b	0.44 $\pm$ 0.4
8. Hafta		2.43 $\pm$ 1.20 ^a	1.81 $\pm$ 0.95 ^b	0.74 $\pm$ 0.47 ^c	1.37 $\pm$ 2.75
10. Hafta	Ağustos	4.19 $\pm$ 1.64 ^a	2.68 $\pm$ 1.04 ^b	2.04 $\pm$ 0.66 ^b	2.11 $\pm$ 0.78
12. Hafta		4.91 $\pm$ 1.59 ^a	3.27 $\pm$ 1.11 ^b	2.35 $\pm$ 0.96 ^c	3.11 $\pm$ 0.86
14. Hafta	Eylül	7.57 $\pm$ 2.71 ^a	4.80 $\pm$ 1.61 ^b	4.11 $\pm$ 1.58 ^b	4.16 $\pm$ 1.25
16. Hafta		10.56 $\pm$ 2.11 ^a	6.96 $\pm$ 1.51 ^b	5.94 $\pm$ 1.08 ^b	5.27 $\pm$ 1.71
18. Hafta	Ekim	12.97 $\pm$ 1.97 ^a	8.74 $\pm$ 1.66 ^b	9.35 $\pm$ 1.72 ^b	7.75 $\pm$ 2.08
20. Hafta		15.33 $\pm$ 1.83 ^a	12.65 $\pm$ 1.60 ^b	11.55 $\pm$ 1.91 ^b	8.31 $\pm$ 2.21
22. Hafta	Kasım	18.07 $\pm$ 1.40 ^a	13.55 $\pm$ 1.04 ^b	13.12 $\pm$ 1.19 ^b	9.13 $\pm$ 2.29
24. Hafta		19.01 $\pm$ 1.57 ^a	13.71 $\pm$ 2.08 ^b	13.39 $\pm$ 1.23 ^b	9.92 $\pm$ 2.31

WE PUBLICIZED OUR PROJECTS ON NATIONAL **TV PROGRAMS**



NATIONAL TRT LIVE BROADCASTING





TRT CHANNEL LIVE COVERAGE

Üniversite havuzunda karides ürettiler !

23/10/2014 12:45 A* A*

Çukurova Üniversitesi havuzda 500 bin jumbo karides yavrusu üretti.



Bögeni 0

Facebook

SOME OUR NEWS IN NATIONAL NEWSPAPERS

Denizden alınan jumbo karides, Çukurova Üniversitesi'nde (ÇÜ) teknik ve bilimsel çalışma sonunda havuzda üretilti.

Türkiye'de denizden yılda yaklaşık 5 bin ton karides yakalandığını anlatan ÇÜ Su Ürünleri Fakültesi Öğretim Üyesi Prof. Dr. Metin Kumlu, denize belirli mesafede kurulacak kapalı sera sistemli havuzlarda da binlerce ton karides üretilbileceğini vurguladı.

Karidesin ekonomik değerinin yüksek olduğunu belirten Kumlu, yaz döneminde kilogramının 60-70 liradan satıldığını kaydetti. (ADANA /AA)

Booking.com



Pattaya -
Sunshine Vista
Hotel

129 TL



Pattaya -
Baboon Beachfront L...

183 TL



Oaks Bangkok
Sathorn

147 TL



Denizden 60 Kilometre Uzakta Karides Yetiştirdi

Adana (ÇÜHM) -

25.09.2014

Çukurova Üniversitesi (ÇÜ) Yerleşkesi içindeki Teknokent'te su ürünleriyle ilgili araştırma geliştirme şirketi kuran kadın girişimci Asuman Beksan ve ÇÜ Su Ürünleri Fakültesi'nde görevli Prof. Dr. Metin Kumlu, Türkiye'de ilk kez denizden 60 kilometre uzakta 2 ayrı cins karides yetiştirdi.

Su Ürünleri Mühendisi Aysun Beksan, öğrencilik yıllarından bu yana hayali olan yengeç ve karides yetiştiriciliği ile ilgili çalışma yapmak için 7 ay önce, Çukurova Üniversitesi Su Ürünleri Fakültesi'nde görevli Prof. Dr. Metin Kumlu ile birlikte şirket kurdu. Karides yetiştiriciliği ile ilgili hazırladıkları projelerle Tarımsal Araştırmalar ve Politikalar Genel Müdürlüğü ve KOSGEB'e başvuran Beksan ve Prof. Dr. Kumlu, kredi desteği aldı. Hemen işe başlayan çift, hazırladıkları havuzlara Adana'ya 60 kilometre uzaklıktaki Karataş ilçesinden deniz suyu taşıyarak, deniz dışında karides yetiştirdi. Ülkede tüketilen karidesin denizden avlandığını veya ithal edildiğini belirten Beksan, "Türkiye'de karides yetiştiren kimse yok. Bu konuda ilk yatırım yapacak kişiler, büyük avantaj sağlayacaktır. Yatırımcıları bekliyoruz" dedi.



"Karidesin Ekonomik Getirisi Çok Fazla"

Su ürünlerinin ekonomik getirisinin çok fazla olduğunu belirten Beksan şöyle konuştu:

"Karidesi ticari boyuta yansıtabilmek için elimizi taşın altına koymamız gerektiğini düşündük. Türkiye'de su ürünleri konusunda araştırma geliştirme yapan tek firmayız. Yatırımcının önünü açmak için çalışıyoruz. Biri bize gelip, 'Burada karides yetiştiriciliği yapmak istiyorum' diyenleri artık yönlendirebilecek durumdayız.



Şu anda 2 karides türü üzerinde çalışıyoruz. Bunlar İskenderun Jumbo karides ve ıslah edilmiş pasifik beyaz karides türüdür. Bu 2 türü bölgemiz koşullarında hasat koşullarına kadar getirdik. Aynı anda milyarlarca yavru üretilir. Üretimde Amerikan pasifik beyazı 3.5 ayda, İskenderun Jumbo karides ise 5 ayda istenilen boyuta ulaşır. Veya istenilen boyuttayken hasat edilebiliyor. Deniz kenarına yakın, her biri 5-10 dönümlük toprak havuzlarda üretilen karides, yatırımcıya büyük kar ettirecek"

TESTING NEW TASTES IN TURKEY WITH OUR PRODUCTS

(Dishes were prepared by a famous chef)





ŞEKİL 4.19. Hasat edilen Pasifik beyaz karidesinin tat denemesi amacıyla Adana'da profesyonel bir aşçı tarafından hazırlanmış olan güvecin görüntüsü.

WHAT ADVANTAGES do we have in TURKEY For FARMING SHRIMPS?

- ✧ There are several **LOCAL SHRIMP SPECIES** that can be farmed,
- ✧ **TEMPERATURE** is warm enough to produce shrimp with almost **NO OR MINIMAL HEATING**
- ✧ **OUTDOOR PRODUCTION IN PONDS** can also be performed between APRIL and NOVEMBER (6-7 Months)
- ✧ By using **GREENHOUSES**, it is possible to produce shrimp between MARCH and DECEMBER (9-10 months), enough time for 2 CROPS
- ✧ There is **NO POLLUTION** nor **DISEASE** problems

- ✧ **SOLAR ENERGY** is available throughout the year
- ✧ The **LOCAL MARKET** can additionally consume thousands of tons of farmed shrimp, when available.
- ✧ **FRESH PRODUCTS (never FROZEN)** can be regularly exported to EUROPEAN as well as Russian and Ukrainian Markets within 2-3 days by trucks.
- ✧ The sector is well-experienced in **PROCESSING, PACKAGING** and **MARKETING**
- ✧ So far, we have developed enough **KNOW-HOW, TECHNOLOGY** and **EXPERIENCE** in this field.

WHAT ARE THE KEY FACTORS FOR A SUCCESSFUL Shrimp Farming in TURKEY

- ❖ AVAILABILITY OF **UNDERGROUND WARM WATER** (21-25 °C)
- ❖ **INTEGRATING GREENHOUSES** TO CULTURE STRATEGY
- ❖ **OVERWINTERING SHRIMP or GROWING THEM IN RAS SYSTEM** AT LEAST DURING COOLER MONTHS
- ❖ PREFERRING **cheapest ENERGY SOURCES** FOR HATCHERY & NURSERY, but also sometimes for OVERWINTERING FACILITIES (charcoal, solar energy, natural gas etc.)

- ❖ Producing **TWO CROPS PER YEAR** WITHOUT MUCH EXTRA HEATING COSTS
- ❖ **PRODUCING at least 1 CROP IN OPEN PONDS** NATURALLY BETWEEN MAY and NOVEMBER (6-7 Months)
- ❖ Preferring SPF/**FASTGROWING WHITE SHRIMP** BROODSTOCK to produce the seeds at the farm level (not importing PLs)
- ❖ USING NUTRITIONALLY BALANCED AND **LOW COST FEEDS**
- ❖ TARGETING NOT ONLY DOMESTIC MARKETS BUT ALSO **INTERNATIONAL MARKETS** (EUROPE, RUSSIA etc.)
- ❖ **PROVIDING FRESH SHRIMP REGULARLY** TO MARKET THROUGHOUT THE YEAR



FINAL REMARKS

- ✧ *IT HAS BEEN **IMPOSSIBLE** TO DEVELOP SHRIMP FARMING SECTOR WITH **LOCAL SPECIES**; needs A BREEDING PROGRAM*
- ✧ ***Pacific White Shrimp & its SUSTAINABLE FARMING STRATEGIES** HAVE ALREADY BEEN tested in Turkey & already SET (we received hundreds of potential investors over the last year)*
- ✧ *AFTER A LONG TIME of STRUGLES, WE HAVE FINALLY RECEIVED **LICENCE TO FARM PACIFIC WHITE SHRIMP in Turkey** (but only in RAS SYSTEMS), just two weeks ago!!!*
- ✧ *WITH PROPER MANAGEMENT, IT IS POSSIBLE TO **PRODUCE 2-3 CROPS/YEAR** IN RAS SYSTEM UNDER SIMPLE GREENHOUSES IN OUR REGION*
- ✧ ***INTEGRATION OF SOLAR ENERGY** SHOULD PROVIDE ADVANTAGE (the Government is subsidizing 65% of the investment)*
- ✧ *SUPPLY of **FRESH or PROCESSED SHRIMP** at a regular manner **THROUGHOUT THE YEAR** must be a Priority*

A woman with dark hair tied back, wearing a white t-shirt and green overalls, stands on a metal framework of a building under construction. She is smiling and giving a thumbs-up with her right hand, while her left arm points towards the right. The background shows more of the building's steel structure and some greenery in the distance.

**THANKS FOR YOUR
ATTENTION**

mkumlu@gmail.com
asumanbeksari@gmail.com

Yeni tesislerin kurulması
heyecan verici