

Tilapia 2015

April 2-4, 2015

ASC Tilapia Certification: The Taiwan Experience

Fu-Sung “Frank” CHIANG, Ph.D.

Professor

Institute of Applied Economics

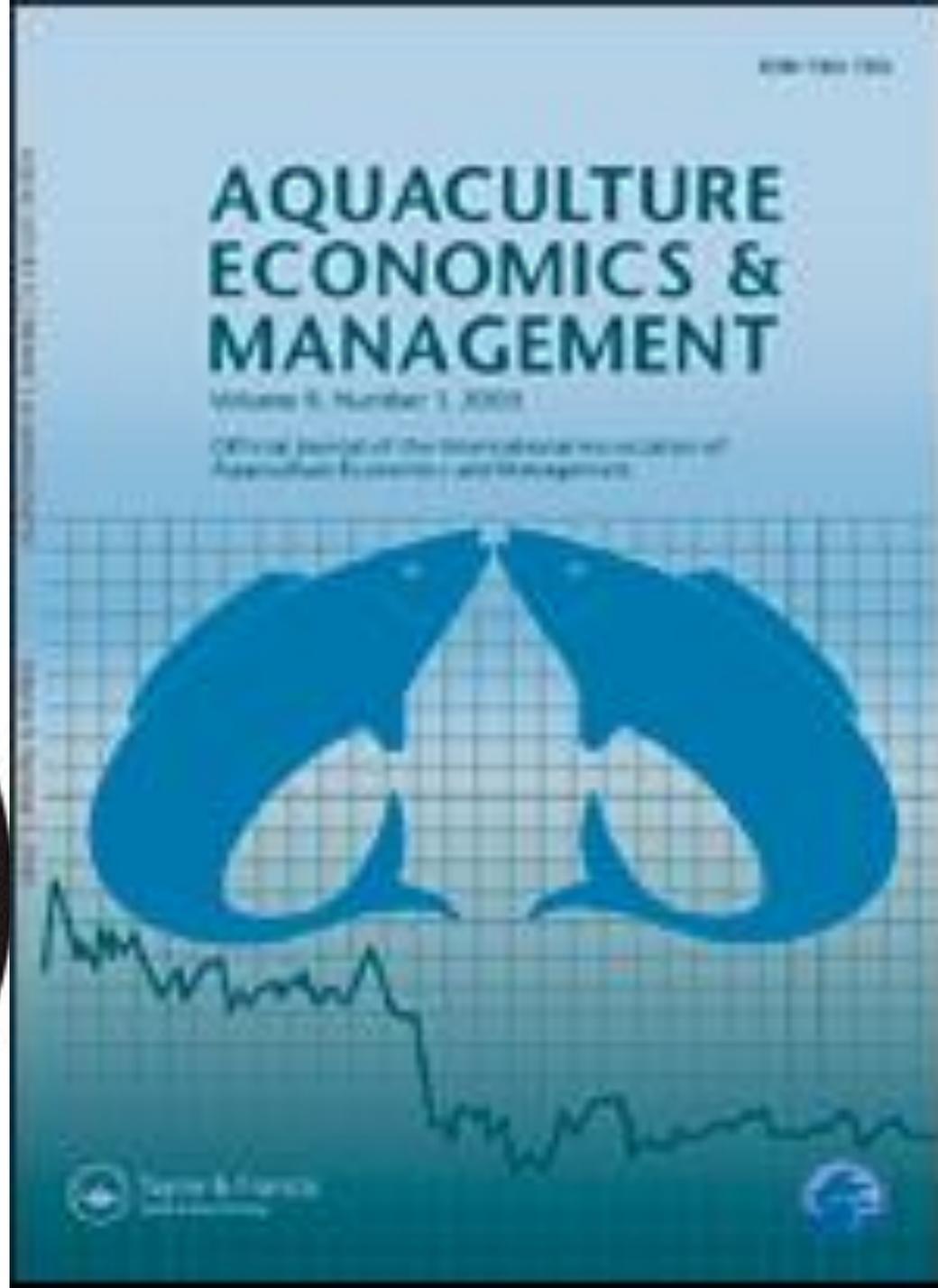
National Taiwan Ocean University

TAIWAN

Fu-Sung “Frank” CHIANG

- **Regional Director, International Association of Aquaculture Economics and Management (IAAEM), 2009 - Present.**
- **Visiting Professorships: University of Maine-Orono, USA, 2011-12; University of California-San Diego, USA, 2011; Can Tho University, Vietnam, 2014; Nha Trang University, Vietnam, 2008-10, 2013.**
- **Committee, Seafood Safety Advisory Committee, Taiwan Aquaculture Foundation, 2012 - Present.**
- **Dean, College of Humanities and Social Sciences, National Taiwan Ocean University, Taiwan, 2008-09.**
- **Professor and Director, Institute of Applied Economics, National Taiwan Ocean University, Taiwan, 2006-08.**
- **Executive Director, Taiwan Tilapia Alliance, Taiwan, 2004-07.**

***International
Association of
Aquaculture
Economics and
Management***



Fu-Sung “Frank” CHIANG

- Invited Expert, Tilapia Feedmill Project Assessment in Guatemala, Oct. 2013 to May 2014.
- Invited Expert, Freshwater Pacú (*Pyractus mesopotamicus*) Hatchery Project Assessment in Paraguay, March 2014.
- Invited Expert, Tilapia Processing Plant Project Assessment in Guatemala, April 2014.
- Committee, Scientific Committee for International Institute of Fishery Economics and Trade (IIFET) 2012 and 2014 Conferences.
- Lecturer, Workshop on Tilapia Culture, International Cooperation and Development Fund, Honduras, March 2011.
- Advisor, Myanmar Fish Farmers Association, Union of Myanmar, 2007-12.

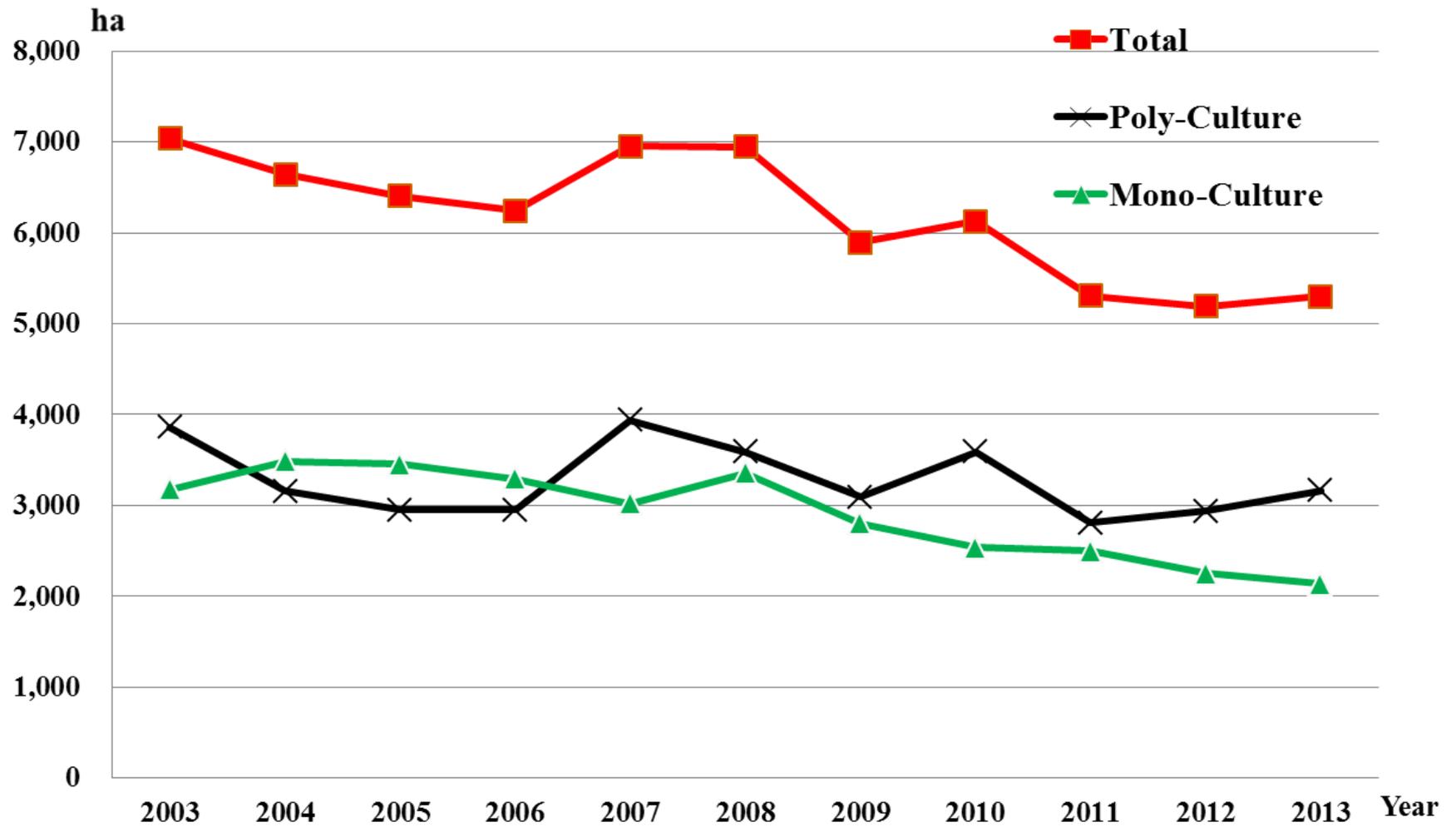


Outline

- **A Supply Shortage Production in Taiwan**
- **An Increasing Domestic Demand**
- **A Difficult Year for Processors and Exporters**
- **The ASC Certification in Taiwan**
- **ASC Tilapia Certification: The Tosei Seafood Experience**
- **Concluding Remarks**

Taiwan Tilapia Development

- Thirteen tilapias (*Oreochromis mossambica*) were brought into Taiwan in 1946.
- A negative image had been generated from the Pig-Tilapia-Vegetable system during 1950s-70s. In addition, consumers also had the perception of poor man's fish then.
- Taiwan began to export whole frozen tilapia in the late 1980s and frozen fillets to Japan in the early 1990s with a price of USD12 per kg.
- In the early 2000s, tilapia became a commodity.
- Taiwan Tilapia Alliance (T²A) was formed on February 19, 2002.
- An effective marketing strategy, a new product mix, and market diversity are needed for the sustainable development of Taiwan's tilapia industry.



Area of Taiwan Tilapia Farming, 2003-2013

Market for Tilapia

- ❖ **20 - 50 gm/fish: feeding carnivorous fishes**
- ❖ **300 - 500 gm/fish: traditional food service like meal box, buffet, and restaurant**
- ❖ **500 - 1.0 kg/fish: local live fish market and processing plant**
- ❖ **1.0 kg/fish up: processing plant**

A Supply Shortage Production

- A high price in summer 2012 and a shortage of glass eel contributed an over-supply in the early 2013.
- A negative TV report broadcasted in Korea on Oct 25 2013 frozen the exports for a year.
- The shortages of tilapia fries in 2013-2014 because of abnormal weather.
- The outbreak of avian influenza or bird flu in Jan. 2015.



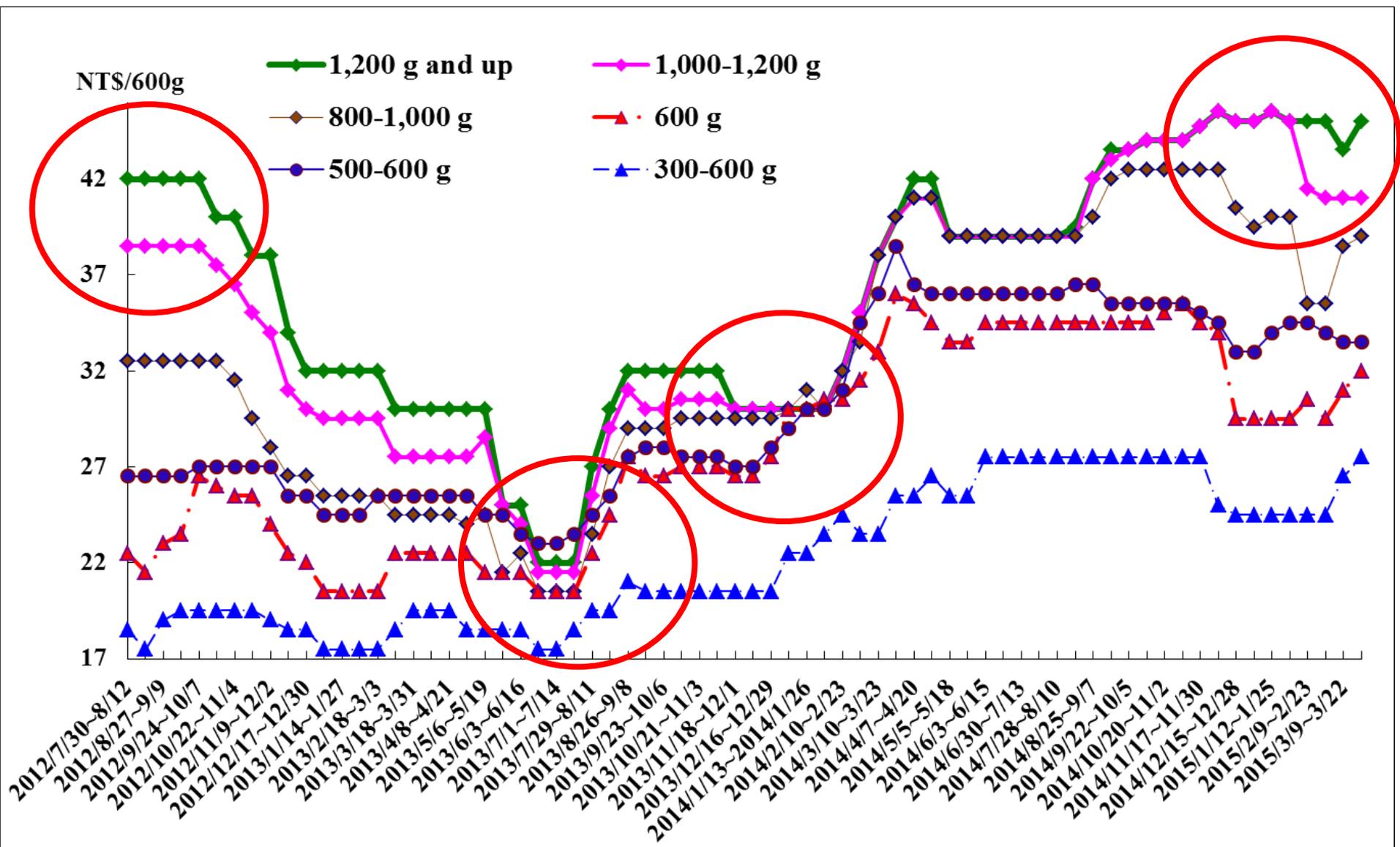
**1-Day old of Tilapia
Fry Harvesting**

An Increasing Domestic Demand in Taiwan

- **Tilapia is still one of cheaper fishes in either the live whole fish market, the sushi bars, or hot pot restaurants in Taiwan.**
- **The outbreak of avian influenza or bird flu in Jan. 2015 drove up the demand for fish and fish products.**



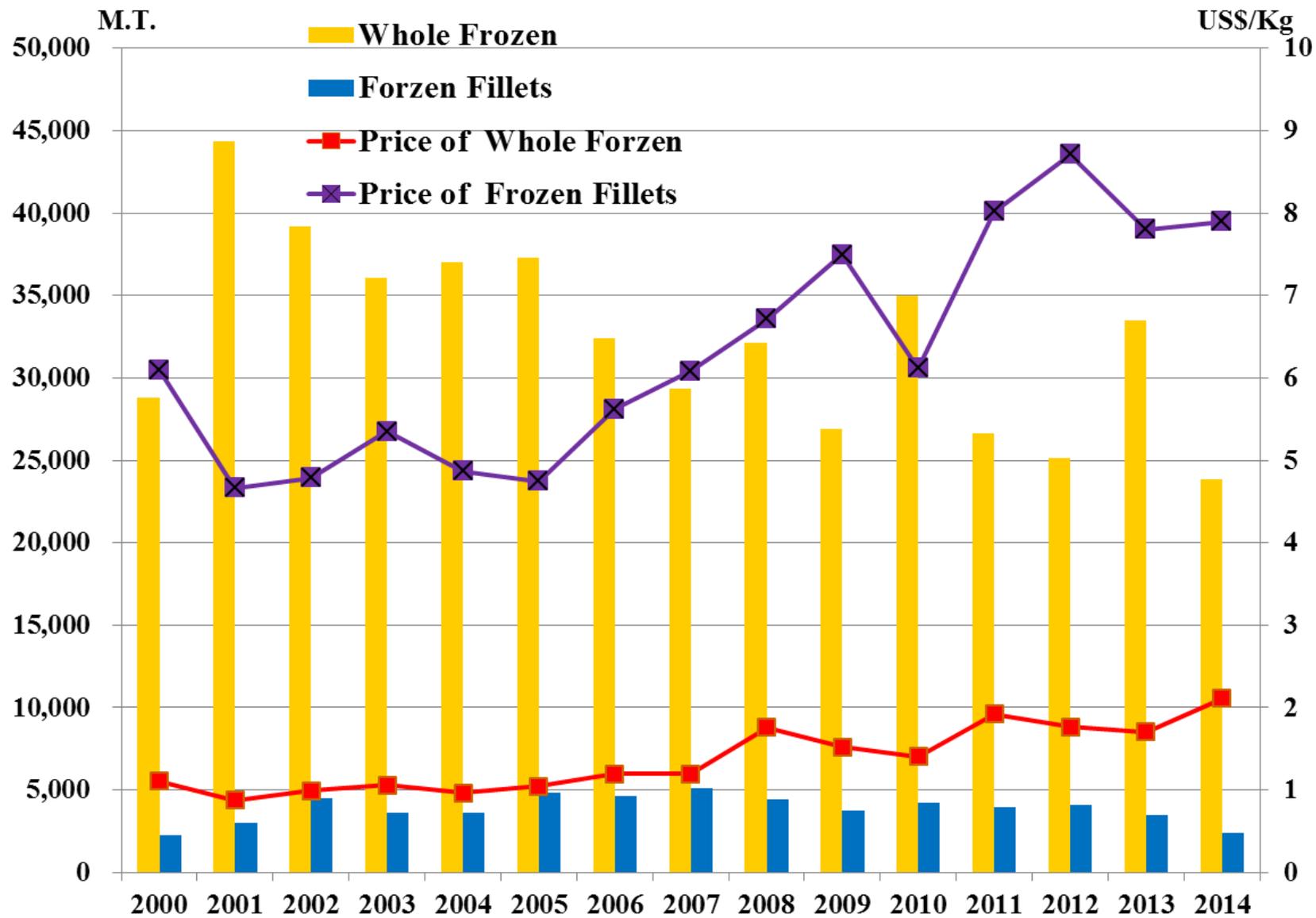
Fresh Red Tilapia: US\$3.81 per 600gm
Fresh Black Tilapia: US\$2.86 per 600gm
in the retailed market as of March 24, 2015



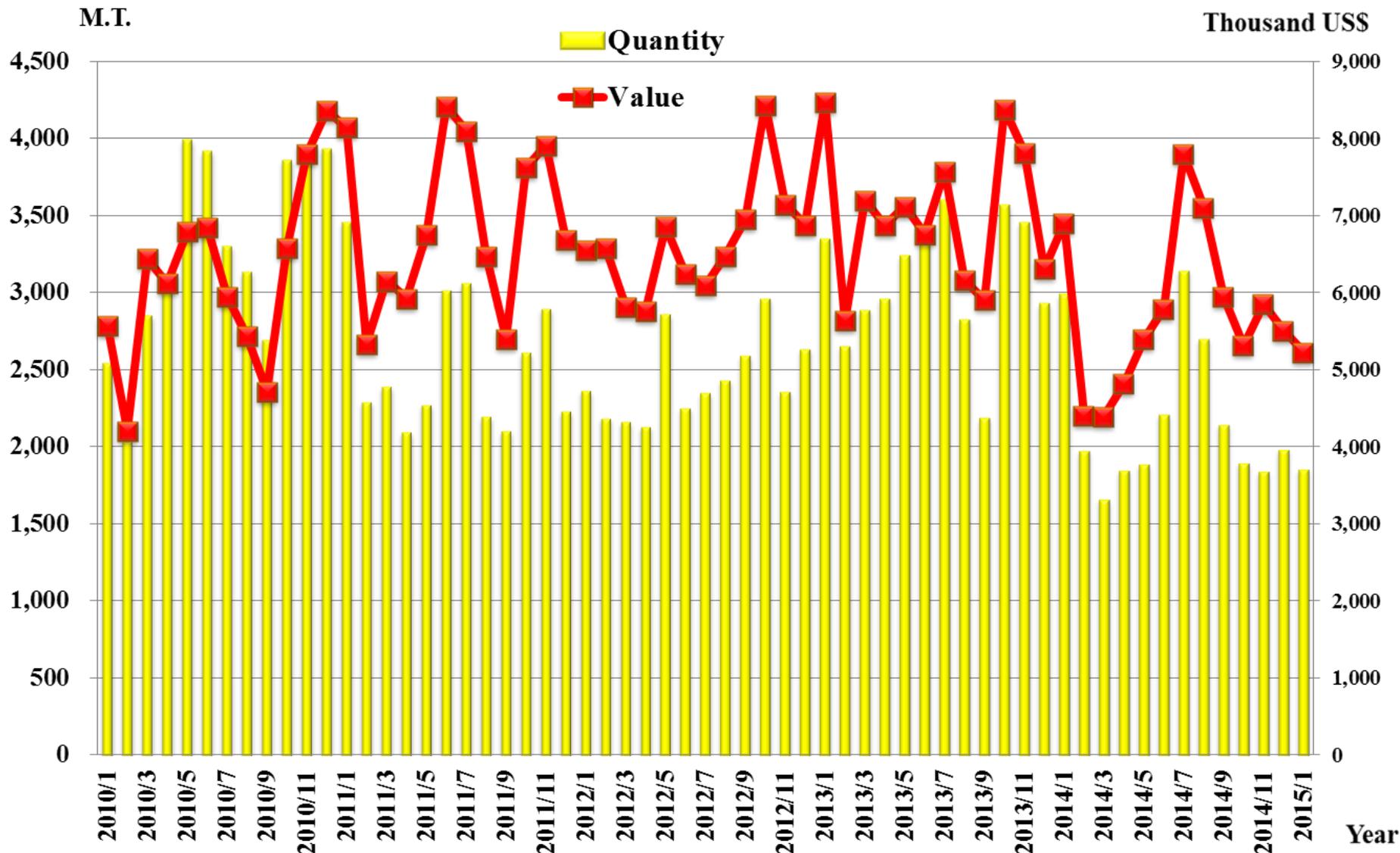
Bi-Weekly Farm Gate Price of Taiwan Tilapia, July 2012-March 2015

A Difficult Year for Processors and Exporters

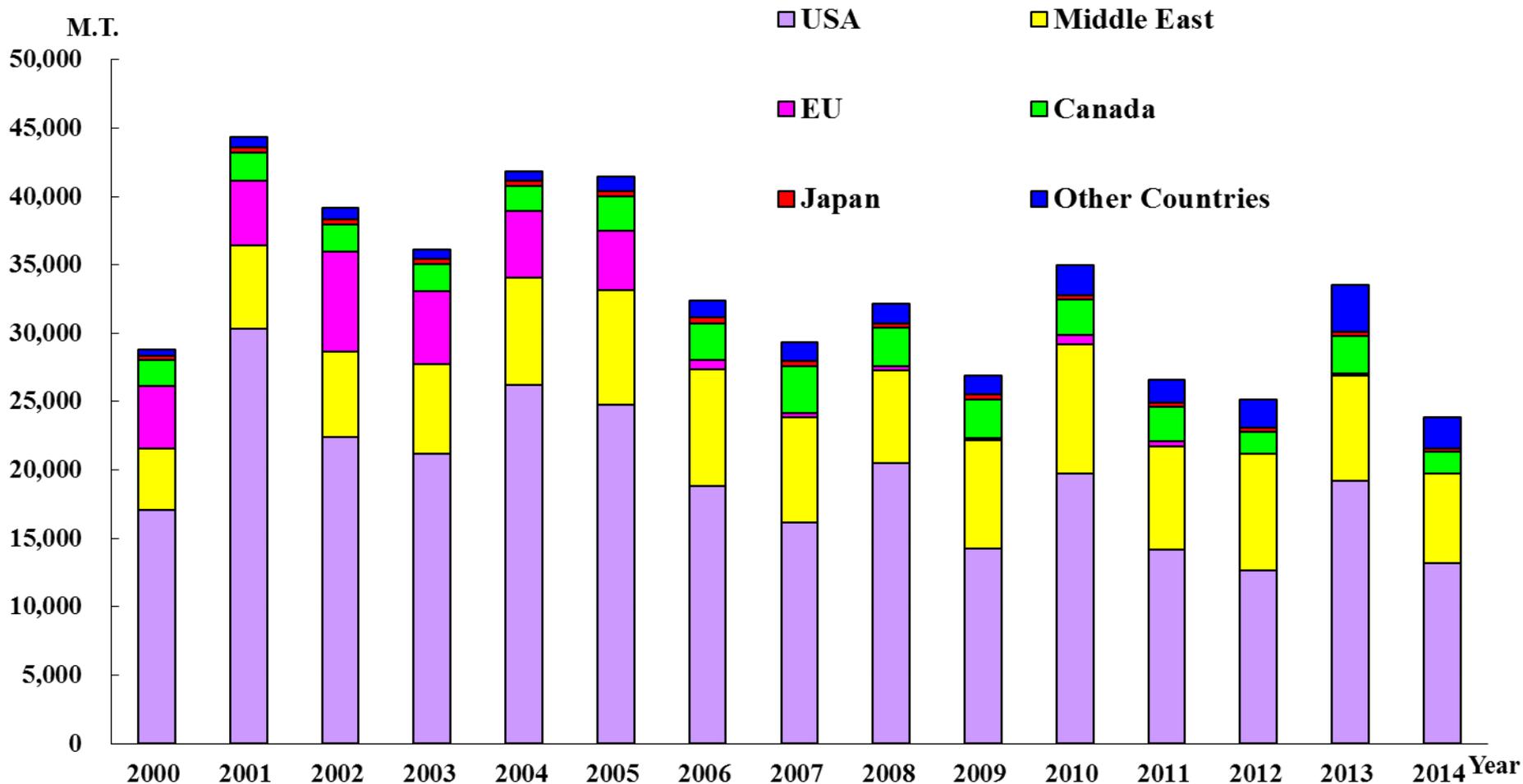
- **Production cost is increasing**
- **Shortage of material supply**
- **Ability to compete with the other countries' players**
- **Not yet fully recover the Korean fillet exporting market**



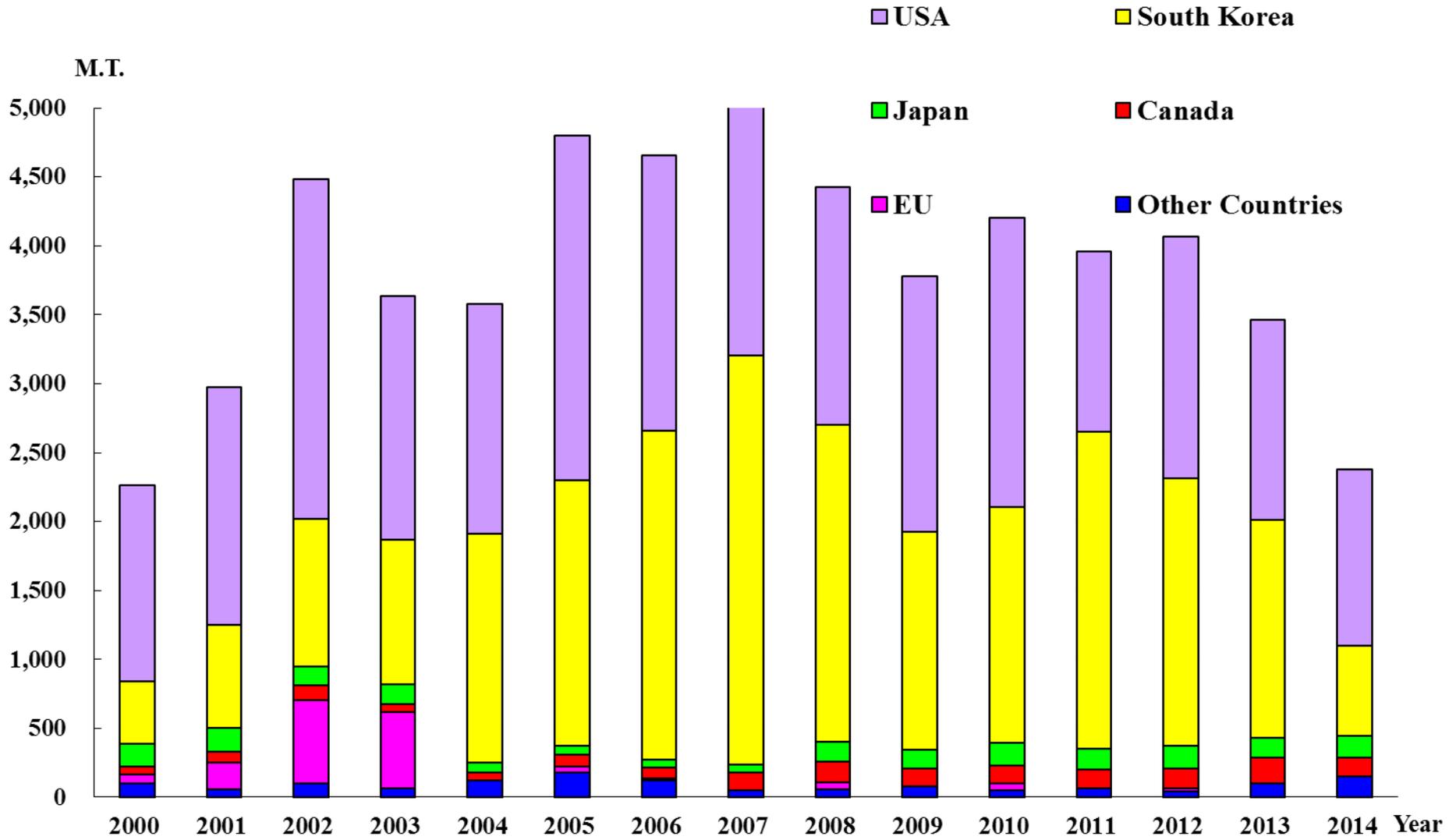
Quantity and Price of Taiwan Tilapia Exports, 2000-2014



**Monthly Quantity and Value of Taiwan Tilapia Exports,
Jan 2010 – Jan 2015**



The Main Exporting Countries of Taiwan whole Frozen Tilapia, 2000-2014



The Main Exporting Countries of Taiwan Frozen Tilapia Fillet, 2000-2014

The ASC Certification in Taiwan (I)

- Currently, there are 3 seafood processing plants awarded the ASC certificates in Taiwan. They are:
- **FORTUNE LIFE ENTERPRISE CO., LTD. (2013),**
- **KOUHU Fishes Cooperation (2013),**
and
- **TOSEI SEAFOODS CO., LTD. (2014)**

The ASC Certification in Taiwan (II)

- Currently, there are 2 tilapia farming operators awarded the ASC certificates in Taiwan. They are:
- NanYing Aquaculture Association (2013)
- **TOSEI SEAFOODS CO., LTD. (2014)**

東晟水產有限公司

TOSEI SEAFOODS CO., LTD.

**ASC Tilapia
Certification:
The Tosei Seafood
Experience**



東晟水產
TOSEI SEAFOOD

List of Tosei's related Certifications

- ◆ **Founded in 1995**
- ◆ **HACCP certified in 1999**
- ◆ **CAS certified in 2005**
- ◆ **GAP certified in 2007**
- ◆ **Tilapia and Seabass CAS certified in 2010**
- ◆ **Fresh Tilapia and Seabass fillets HACCP certified in 2012**
- ◆ **ISO22000 certified in 2012**
- ◆ **EU Food Safety Management System certified in 2013**
- ◆ **ASC certified in 2014**

Certification Timeline

- 🟢 **June 2012: Planning and Preparation**
- 🟢 **Jan. 2013: Application submitted**
- 🟢 **Nov. 2013: 1st on-site Audit**
- 🟢 **March 2014: 2nd on-site Audit**
- 🟢 **June 2014: Certificate awarded**
- 🟢 **Feb. 2015: Review Audit (every 6 months)**



東昇水產
TOSEI SEAFOOD

60

南鋁車體公司

南鋁車體
05-2373582-4

南鋁車體
237359



Aquaculture
Stewardship
Council

Accreditation code: ACC-MSC-027
License code: MSC0221

IMOsuisse AG
Weststrasse 51
CH-8570 Weinfelden
Fon +41 (0) 71 626 0 626
Fax +41 (0) 71 626 0 623
info@imo.ch
www.imo.ch



CERTIFICATE

No. 130544

**TOSEI SEAFOOD CO.
LTD FARM**

No.3, Yi-Kong 3RD Yi-Chu Hsiang
Chai-Yi Hsien 624

Taiwan, R.O.

The IMOsuisse AG (IMO) hereby confirms that the above mentioned operation was inspected and certified according to the ASC Tilapia Standard v1.0. The below listed activities and products were found to be in compliance with the rules defined in said standard. It is the certificate holder who is responsible for permanent compliance with the applicable requirements.

Main Activity: Aquaculture Operations

Certified Products: Tilapia (*Oreochromis Niloticus*)

The full list of product groups covered by this certificate shall be verified on the ASC database.

Point at which certified products may enter a chain of custody:

At point of unloading from sealed tanks

Date of Inspection(s):

31.07. – 01.08.2014

Validity

From date of issuance until 25.09.17

The validity of this certificate shall be verified on www.asc-aqua.org/finalfarmauditreports

Issue date: Weinfelden, 26.09.2014

IMOsuisse AG (IMO)



This certificate remains the property of IMO and must be destroyed or returned to IMO along with all copies or reproductions if requested by IMO.

This certificate itself does not constitute evidence that a particular product supplied by the certificate holder is ASC-certified. Products offered, shipped or sold by the certificate holder can only be considered covered by the scope of this certificate when the required ASC claim is clearly stated on invoices and shipping documents.

This acknowledgement may not be used as a trade transaction certificate.

CERTIFICATE

N° ASC-C-00296

TOSEI SEAFOODS Co. LTD
No. 3 Yi-Kong 3RD, YI-CHU HSIANG CHAI-YI HSIEN 624
TAIWAN, ROC

The IMOsuisse AG (IMO) hereby confirms that the above mentioned operation was inspected and certified according to the Marine Stewardship Council (MSC) Chain of Custody (COC) standard v3.0*. The below listed activities and products were found to be in compliance with the rules defined in this standard. The certificate holder is responsible for the permanent compliance with the applicable requirements**.

Die IMOsuisse AG (IMO) bestätigt hiermit, dass der oben genannte Betrieb gemäss dem Marine Stewardship Council (MSC) Chain of Custody (COC) Standard v3.0 kontrolliert und zertifiziert wurde*. Die nachfolgend genannten Tätigkeiten und Produkte entsprechen den Vorschriften dieses Standards. Verantwortlich für die kontinuierliche Einhaltung der genannten Anforderungen ist der Zertifikatsinhaber**.

Scope
 Geltungsbereich

Trading Fish (Buying/ Selling) – Transportation – Storage - Wholesale - Packing or Repacking (or Contract Packing or Repacking) – Processing - Contract Processing - Retail to Consumer - of ASC Certified Products

(for a detailed products list, see Annex 1)

Handel (Einkauf/ Verkauf) – Transport – Lagerung – Grosshandel - Verpacken oder Umpacken (ggf. Verpacken oder Umpacken im Lohnauftrag) – Verarbeitung - Lohnverarbeitung - Einzelhandel - von ASC zertifizierten Produkten

(für detaillierte Produktliste, siehe Annex 1)

Date of first certification: 16.06.2014
 Datum der Erstzertifizierung

Updated: 24.02.2015
 Aktualisiert:

Valid until: 15.06.2017
 Gültig bis:

Next update: 2015
 Nächste Aktualisierung:

Weinfelden, 24.02.2015

IMOsuisse AG (IMO)



* This acknowledgement may not be used as a trade transaction certificate. ** All use of the MSC eco-label requires a license from MSC.

* Diese Bestätigung gilt nicht als Warenbegleitschein. ** Jede Nutzung des MSC-Logos erfordert eine gültige MSC-Logo-Lizenz.

臺南縣佳里地政事務所
土地所有權狀

登記日期：中華民國096年05月24日
發狀日期：中華民國096年05月24日
權狀字號：096土字第00 號

所有權人：葉
統一編號：

土地標示：

坐落：學甲鎮宅子港段

地號：

地目：

等則：--

面積：**** 平方公尺

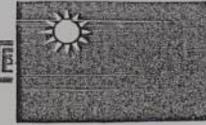
權利範圍：*****

以上土地所有權業經依法登記完畢，合行發給本權狀以憑執管。

主任 郭香蘭

中央印製廠

本權狀物權是否變更或設定他項權利請查詢本所登記之權利資料



字號：養字第099 號

台南市陸上魚塢養殖漁業登記證

葉勝謙 申請養殖漁業登記，經核與陸上魚塢養殖漁業登記及管理規則

第五條規定相符，准予登記，登記事項如下：

經營地址：台南市學甲區宅子港段 號共零三筆

負責人姓名：葉

身分證字號：

負責人住址：臺南市學甲區

經營面積：.00平方公尺

經營方式：混養

養殖方法：養殖

水源：

養殖種類：淡吳郭魚、淡虱目魚、黑鯪、鯽魚

有效期限：自中華民國101年6月6日至106年6月5日

限制事項：養殖漁業人不得繁殖或養殖未經中央主管機關核准進口之水產
動植物。

工業區

Legal Papers of the Farm:
Titles and Permits

本證之利用由請本權狀及土地建物持證文件，並於每年5月底前向區公所申請



葉勝謙等2人申請臨時用水登記依水利法第 44 規定查核尚無不合應准發給臨時用水執照以資證明

執照號數 第 D 0 B [redacted] 號
申請日期 民國 101 年 9 月 3 日
臨時使用權人姓名 葉 [redacted] 等2人
核准臨時使用權年限 自民國 101 年 10 月 1 日起至民國 103 年 9 月 30 日止
用水標的 農業用水
引水水源 引水水源系：將軍溪 引水源支流：營後排水
用水範圍 學甲區宅子港段 [redacted] 等6筆土地
園內 養殖面積 [redacted] 公頃

使用方 法 機械動力抽汲地面水，設50.8公厘2匹馬力電動抽水機1台

引水地點 臺南市學甲區宅子港段 [redacted] 地號
退水地點

月 別	一月	二月	三月	四月	五月	六月
每月引水日數(日)	0	0	0	0	0	30
引用水量 (每秒立方公尺)	0	0	0	0	0	0.001
每日用水時間(小時)	0	0	0	0	0	14
月 別	七月	八月	九月	十月	十一月	十二月
每月引水日數(日)	31	31	30	31	0	0
引用水量 (每秒立方公尺)	0.001	0.001	0.001	0.001	0	0
每日用水時間(小時)	14	14	14	14	0	0

水頭高度(水力用) 公尺 水井深度(地下水用) 公尺

登記主管機關 臺南市政府

其他應行記載事項

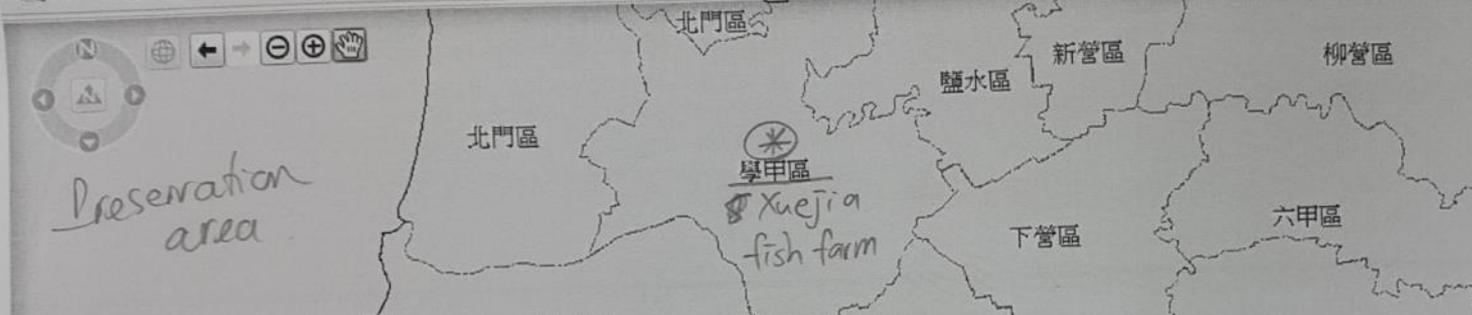
市

Legal Papers of the Farm: Permits for water use

TOSEI SEAFOODS CO.,LTD

Endangered Species found protocol

1. 保育類野生動物以外皆屬於非保育類動物，野生動物保育名錄可至行政院農委會林務局自然保育網>下載專區>野生動物名錄下載。
2. 發現非保育類動物，非保育類動物屬大自然環節的一環，生物消長係自然常態，如無明顯外傷，應就地野放，若有發現受傷之非保育類動物，請先通知所在地鄉鎮市公所獸醫緊急處置，或後送台南市政府動物防疫所後續救傷。



圖資分類 關鍵字查詢

生物 棲地 環境 資源管理

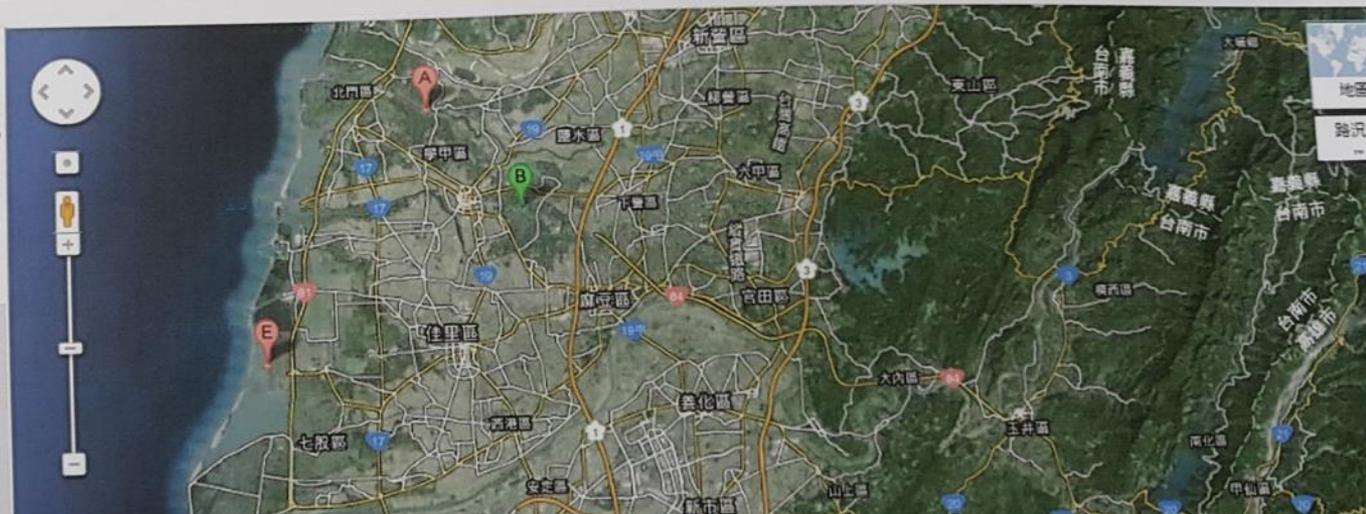
共 5 筆 / 1 頁

- 自然保留區
- 自然保護區
- 野生動物保護區
- 野生動物重要棲息環境

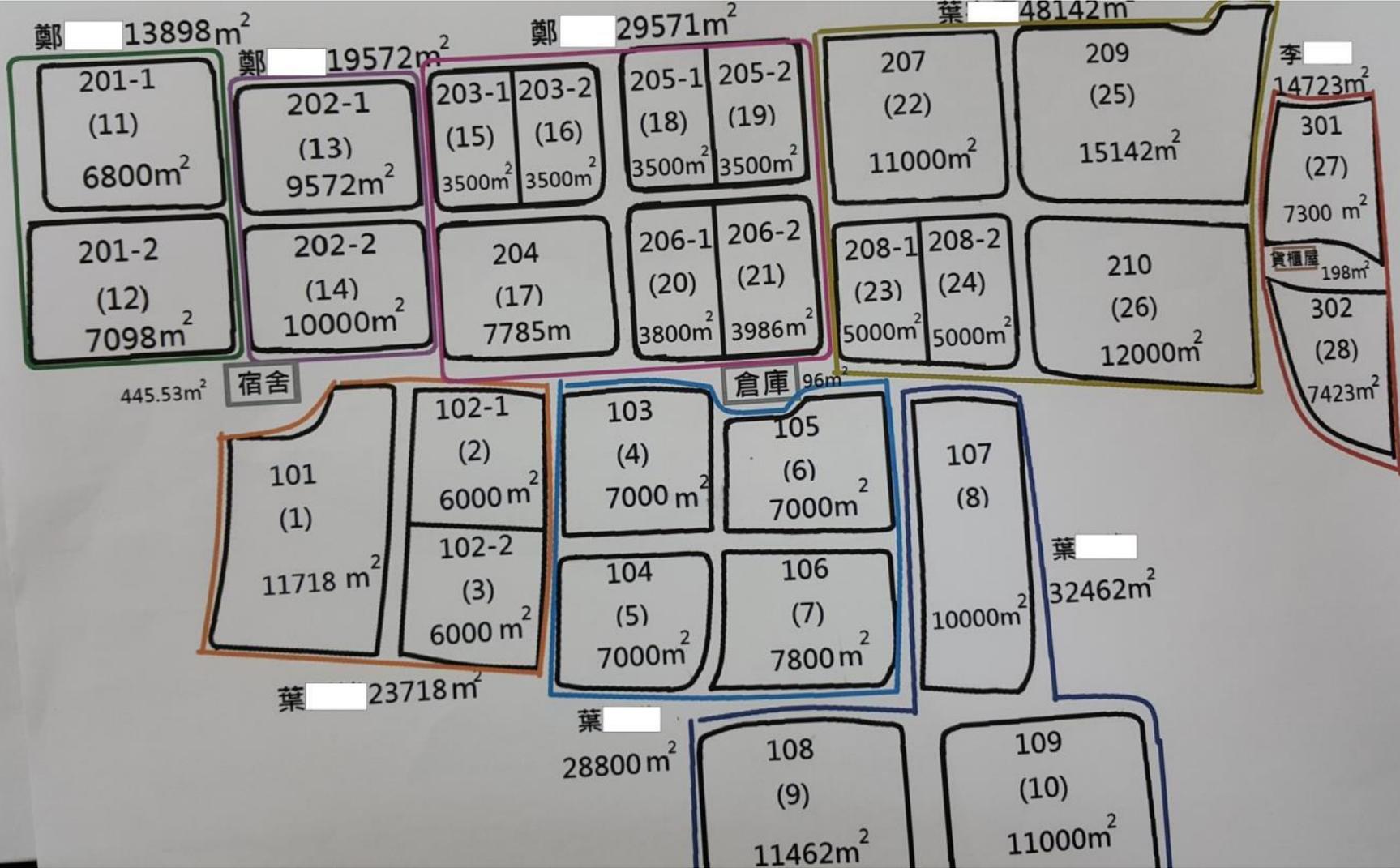
加入圖層 圖層清單



- A 學甲濕地生態園區**
台南市學甲區
1 篇評論
"真的是來看生態的"
- B 四草濕地**
台南市安南區
- C 高懿行島濕地景觀區**
台南市安南區
- D 北汕尾濕地景觀**
台南市安南區
- E 七股鹽田濕地**
台南市七股區
- F 鹽水溪口濕地**
台南市安南區
- G 城西濕地景觀區**
台南市安南區
- H 曾文溪口濕地**
台南市七股區



Maps of the farm site and surrounding ecosystems



利和園
 業別登記
 產權登記
 案號: 991091700



Farm Office





福光企業有限公司
TEL: 02-2608-1111
FAX: 02-2608-1111

An aerial view of a water treatment pond. In the foreground, a large aerator is splashing water, creating a large white spray. In the middle ground, a smaller aerator is visible, with three birds perched on its central column. In the background, another aerator is splashing water. The water is a calm, greyish-blue color. The surrounding area is lush with green vegetation.

Water Quality

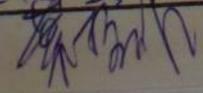




每日溶氧量、鹽度、溫度紀錄表

池	項目\日期	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	DO值(早)mg/L																
	DO值(午)mg/L																
	鹽度‰																
	溫度°C																
10	DO值(早)mg/L	6.1	6.2	6.2	6.3	6.2	6.1	6.1	6.2	6.3	6.1	6.2	6.1	6.1	6.2	6.3	6.2
	DO值(午)mg/L	6.0	6.1	6.1	6.1	6.1	6.0	6.0	6.1	6.1	6.0	6.1	6.0	6.0	6.1	6.1	6.1
	鹽度‰	2	2	1	1	2	2	2	2	1	1	1	2	2	2	2	2
	溫度°C	25	25	25	25	24	24	24	25	24	24	24	24	24	23	23	24
13	DO值(早)mg/L	6.2	6.1	6.2	6.2	6.3	6.1	6.2	6.3	6.2	6.1	6.1	6.1	6.1	6.1	6.3	6.2
	DO值(午)mg/L	6.1	6.2	6.1	6.1	6.2	6.2	6.0	6.1	6.1	6.2	6.2	6.0	6.1	6.0	6.1	6.0
	鹽度‰	1	1	2	1	1	2	1	1	1	1	2	2	2	2	1	1
	溫度°C	25	25	25	25	24	24	24	25	24	24	24	24	24	23	23	24
14	DO值(早)mg/L	6.2	6.3	6.2	6.1	6.2	6.1	6.1	6.2	6.4	6.2	6.3	6.2	6.1	6.2	6.1	6.2
	DO值(午)mg/L	6.1	6.2	6.0	6.0	6.0	6.0	6.2	6.1	6.3	6.0	6.2	6.0	6.0	6.0	6.0	6.0
	鹽度‰	1	1	2	1	1	1	1	1	2	2	2	2	2	2	2	2
	溫度°C	25	25	25	25	24	24	24	25	24	24	24	24	24	23	23	24
池 1	項目\日期	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
	DO值(早)mg/L			6.2	6.1	6.3	6.2	6.3	6.3	6.3	6.2	6.2	6.2	6.3	6.2	6.2	6.2
	DO值(午)mg/L			6.1	6.0	6.1	6.1	6.1	6.1	6.2	6.0	6.0	6.0	6.1	6.0	6.0	6.0
	鹽度‰			1	1	1	2	2	2	1	1	2	2	2	1	1	1
池 2	DO值(早)mg/L	6.2	6.3	6.3	6.2	6.2	6.3	6.3	6.2	6.3	6.3	6.2	6.0	6.0	6.1	6.0	6.0
	DO值(午)mg/L	6.0	6.1	6.1	6.0	6.0	6.1	6.1	6.0	6.1	6.2	6.1	6.0	6.0	6.1	6.0	6.0
	鹽度‰	2	1	1	1	2	1	2	1	1	1	1	2	1	1	1	1
	溫度°C	24	24	23	23	23	24	23	23	23	23	22	23	22	22	23	23
池 3	DO值(早)mg/L																
	DO值(午)mg/L																
	鹽度‰																
	溫度°C																
池 4	DO值(早)mg/L	6.2	6.1	6.0	6.2	6.1	6.0	6.2	6.1	6.1	6.1	6.2	6.1	6.1	6.2	6.1	6.2
	DO值(午)mg/L	6.1	6.1	6.0	6.2	6.1	6.0	6.2	6.1	6.1	6.1	6.2	6.1	6.1	6.2	6.1	6.2
	鹽度‰	2	1	1	2	2	2	1	1	1	1	2	2	2	2	2	2
	溫度°C	24	24	23	23	23	24	23	23	23	23	22	23	22	22	23	23

Water quality monitoring

主管: 

填表人: 張明皓

National Chiayi University

Analytical and Technical Service Center

Water Quality Report

Report No. 20150120A

Total 4 pages

Company : TOSEI (東晟水產有限公司)

Sample type : Aquaculture pond and connecting
waters

Submission date : Jan. 27, 2015

ster: Reviwer: Lab Manager:

National Chiayi University
Analytical and Technical Service Center
Water Quality Report

No. 20150120A Page 1 of 4

Items	Sample	Date	Method	Result
pH	101	Jan. 20 2015	Electrode Method	8.4
	102-2			8.3
	103			8.5
	105			8.4
	106			8.4
	107			9.0
	108			8.2
	207			8.4
	RP 上游			7.6
	FA 中游			7.5
	FO 下游			7.5
	Salinity (ppt)			101
102-2		1		
103		1		
105		4		
106		4		
107		4		
108		3		
207		3		
RP 上游		24		
FA 中游		15		
FO 下游		10		
Notes				



Feedstuff and Feeding Practices

魚飼料當量比(成份比)

表單編號:養學-05-01-02

Fish Feed Equivalence Ratio (FFER)complex

2012/5月~2013年5月

魚池	FFER _M	魚粉(%)meal	魚油(%)oil	飼料使用量(kg)	E _F FCR
1	0.79	5 2.5	2 1	48.90	3.52
2	0.45	5	2	20.55	1.98
3	0.60	5	2	24.10	2.68
4	0.68	5	2	31.02	3.01
5	0.51	5	2	27.98	2.26
6	0.87	5	2	32.08	3.84
7	0.79	5	2	35.17	3.52
8	0.00	5	2		
魚池	FFER _O	魚粉(%)meal	魚油(%)oil	飼料使用量(kg)	E _F FCR
1	1.41	5	2	48.90	3.52
2	0.79	5	2	20.55	1.98
3	1.07	5	2	24.10	2.68
		5	2	31.02	3.01
		5	2		2.2

ORIGINAL

NOVEMBER 20, 2012

TO: TO WHOM IT MAY CONCERN

MESSRS

證明書

之飼料原料，魚粉(Salmon Meal)及

STATEMENT

PRODUCT NAME : PERUVIAN STEAM DRIED FISHMEAL

PRODUCT SOURCE AND COMPOSITION : 100% Peruvian anchovy (*Engraulis Ringens*) During production process is exposed to temperatures of 85°C total of 45 minutes.

NAME OF PLANT AND ADDRESS :

- ILO H225-ILO-CRPS**
Caleta Cata Cata, Parcela A-1, Distrito Y Provincia D
Departamento De Moquegua
- CHANCAY H227-CHA-CRPS**
Antigua Carretera Panamericana Norte Km 84, Distrit
Chancay, Provincia De Huaral, Departamento De Lima
- CHIMBOTE H237-CHI-CRPS**
Calle El Milagro S/N, Zona Industrial 27 De Octubre, Di
De Chimbote, Provincia De Santa, Departamento De Anc
- BAYOVAR H065-BAY-CRPS**
Carretera Sechura-Bayovar, Km 54 Bahia De Bay
Provincia De Sechura, Departamento De Piura
- CHICAMA H007-RAZ-CRPS**
Zona Industrial Del Puerto De Malabrigo, Distrito De R
Provincia De Ascope, Departamento De La Libertad

來自於南美洲智利(Chile)鮭魚養殖

英文簽章:

[Redacted Signature]

Feed Manufacturer declarations about % content of fish oil and fishmeal in feed

Auditprogramm ASC COC in Tosei Food

-Processing plant-

Date: [redacted] 11st Nov 2013
Time: [redacted] 8:30 – 15:30
Location: Processing plant
Language: English
Auditors: [redacted]
Responsible staff: Processing plant staffs

Time	Activity	Persons
8.30	Introduction	All
8.45	Organization chart <ul style="list-style-type: none">• Responsibilities• Quality assurance	Responsible staff xxx

The audit program

Auditprogramm ASC COC

-Processing plant-

Date: 30th July 2014
Time: 10:00 – 17:00
Location: Processing plant
Language: English
Auditors: [redacted]
Responsible staff: Processing plant staffs

Time	Activity	Persons
10:00	Introduction	All
10:15	Organization chart <ul style="list-style-type: none">• Responsibilities• Quality assurance	Responsible staff xxx

Audit program – Tosei Food

Date	Place	Content	Detail
10.11.2013	Depart from Ho Chi Minh 胡志明市出發	NA	KAOHSIUNG, TAIWAN Time 高雄抵達 22:10
11.11.2013	Tosei processing plant 工廠端	ASC COC audit	See the separated audit program
12.11.2013	Tosei office 業務辦公室	ASC audit	Documentation 文件檢查
13.11.2013	Tosei office		Documentation
14.11.2013	Farmer visit 魚塭		Onsite visit
15.11.2013	Water sample taken 取水樣馬廄		Water sample taken: - Prior to sunrise 日出前 - Prior to sunset 日落前
16.11.2013	Farmer visit 魚塭		Documentation
17.11.2013	Tosei office 辦公室		Onsite visit
18.11.2013	Tosei office		Documentation
18.11.2013	Tosei office		Closing meeting

The audit program

Audit program – Tosei Food

Date	Place	Content	Detail
30.7.2014	Tosei processing plant	ASC COC audit	See the separated audit program
31.7.2014	Tosei office	ASC audit	1. Documentation 2. Water sample taken - Prior to sunset (5pm – start from office at 4:30pm)
1.8.2014	1. Onsite 2. Office		1. Water sample taken: - Prior to sunrise (6:00am – pick up at hotel in 5:20am)

The Cost Issue

- Dec 14, 2012: NT\$292,169
- April 10, 2013: NT\$68,258
- Feb. 14, 2013: NT\$147,334
- July 4, 2014: NT\$160,900
- Oct. 21, 2014: NT\$149,013
- Jan. 20, 2015: NT\$170,423
- **Total*: NT\$988,092 (US\$31,368)**
- **As of March 2015, 1US\$=31.5NT\$**
- * Paid to IMO only

Concluding Remarks (I)

- **It is worthwhile to get the ASC certification.**
- **It took a longer processing time to complete the procedure.**
- **It would be better to find the RIGHT experts/advisers/translators to do the job.**
- **It is necessary to fully understand the ASC requirements especially on the social issues.**



Concluding Remarks (II)

- **What is the ECONOMIC benefit from the ASC certification in addition to the fame?**
- **Need an active support from the seafood industry, especially the traders and retailers.**
- **Consumer awareness and acceptance on ASC certified products play a critical role in determining the success of the ASC certification.**

Tosei's Environmentally Friendly Tilapia Farm











Eat More Tilapia!