

**Raise competitive ability in seafood exporting development of Can Tho Province by implementing the International standard system HACCP, SQF 1000 -2000<sup>CM</sup>**

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## INTRODUCTION

After joining WTO, Vietnam has to compete with developed countries especially in the field of agriculture in which Viet Nam has strengths. Can Tho is affected directly such as with “Cat fish”, and the problem of residue of antibiotic in shrimp and fish export products. The trade barriers actually hinder developing the export market as the fisheries contribution to material market in the country.

Raw materials supply area (mainly in Cat fish) for export processing factories in Can Tho is developing quickly, but according to experience, practices have not applied the technology standard according to the regulations of the functional office about quality, safety and hygiene food.

Therefore, to support enterprises to improve their competitive ability in developing export fisheries, Can Tho built and implemented “ Science and Technology Program of supporting enterprises enhance competitiveness to integrate”. Based on this, Department of Agriculture and Rural development implemented the project “ **Raise the competitive ability in seafood exporting development of Can Tho Province by implementing the International standard system HACCP, SQF 1000 -2000<sup>CM</sup>**”

## TARGET OF PROJECT

**Immediate targets:** Training, teaching to implement internationally recognised standards system about quality, safety and hygiene food for rural households, aquaculture farm, enterprises of aquatic product processing for export, agricultural and fisheries extension officers, (DNCBTSXK) belong to Department of Agriculture and Rural development, to perform HACCP and SQF 1000-2000 system, are certified quality and safety by International Organization

We worked with 3 factories processing aquatic products for export, a club of Panga Catfish cultured (50 households) which has output 10.000 tons/year and a club of fresh water prawn culture at area of project-Thot Not.

**Long-term target:** To Implement on farms and enterprises of aquatic product processing for export in area to ensure quality, safety and hygiene for aquatic product to serve domestic consumption and for export.

## CONTENTS AND METHODS

**1. TIME: from 5/2003 to 12/2007**

### **2. CONTENTS**

#### **Establish the board of operating for implementing SQF 1000<sup>CM</sup>**

Contains 10 steps:

*Step 1:* Training HACCP experts and practice SQF 1000-2000<sup>CM</sup> experts to organize and implement the system of safety and hygiene food at farms and processing aquatic product for export factories.

*Step 2:* Group to edit practices: experts of SGS company and trainees at step 1 together with consultation group edit practical procedures for applying to aquaculture farm.

*Step 3:* To consider documents of practical procedures, we organized a conference to collect ideas of Department, Committee, and Professionals to increase the awareness and application of the Practical rules

*Step 4:* Edit general plan of SQF 1000<sup>CM</sup> –HACCP system in order to organize implementing safety and hygiene food standard achieved aquaculture farm of SQF 1000<sup>CM</sup> - HACCP system.

*Step 5:* Prepare quality manual and practical rules

*Step 6:* Review documents of quality manual, experts of SGS Vietnam and editing group considered, accessed and adjusted quality manual

*Step 7:* Edit training handbook for program: Experts and consultation group edited training program for implementing steps in the cultivating areas

*Step 8:* Train the SQF 1000<sup>CM</sup> lecturer: SGS Viet nam Company train 25 SQF 1000<sup>CM</sup> lecturers

*Step 9:* Train internal assessment specialist. SGS group train 25 SQF 1000<sup>CM</sup> assessment, organize the examination and award the internal assessment certificate, along with SGS assess the quality of cultivating area.

*Step 10:* Certificate SQF1000-2000<sup>CM</sup> group

\* Till now, 2009 May, SQF1000-2000 Project has been offered to transfer to Fisheries processing Companies and Fishfarms.

### **3. METHODS**

#### **3.1. Measures**

- Implement, train authorized specialists, expert of internal assessment for members, suppliers; apply on farm and in processing factory according to a management specific procedure.

- Internal check about implementing the quality safety and hygiene food in farms and factories

- Organize to test application, support farm and factories to perform, SGS group assess, certificate and announce results.

- SGS Viet Nam group have to carry out exactly contents of contract with the Head Committee.

### **3.2. Joining requirements**

\* Audiences:

Qualification requirement: Graduated from University and have at least 2 years practical experience.

\* Joining form:

The chosen organizations and individuals for teaching HACCP and SQF 1000-2000<sup>CM</sup>, teaching internal accessing expert, lecturer and members have to commit to organize to implement international quality HACCP and SQF 1000-2000<sup>CM</sup> standard in farm and processing factories as well as develop the program to be assessed and certified to reach the standard of safety and quality HACCP and SQF 1000-2000<sup>CM</sup>.

\* Interests:

- Manage quality and safety food in processing fisheries product and in farm

- Timely overcome and adjust to prevent risks in process of cultivating in farm, and processing in factories and other requirements of procedure of obeying safety and hygiene food.

- Construct the quality manual, practical rules, method of storage and keeping records.

- To be certificated that as SQF 1000<sup>CM</sup> practical expert, lecturer, internal assessing expert.

- To be organized to train, widen to perform SQF1000-2000<sup>CM</sup> accordance with the guidelines of the SGS group.

- To be consulted about organizing to perform and to be recommended by SGS assesment for awarding SQF1000 – 2000<sup>CM</sup> certificate.

## RESULTS

**SQF in fisheries project in Can Tho was performed to meet the requirements of management about quality, safety and hygiene food from farm to customers which comply with the regulations of countries who import fisheries product of Viet Nam. From 5/2003, The head committee had finished 10 steps in contents of draft, as follow:**

### ***Step 1: Train HACCP specialists and SQF practical experts.***

The Administration committee held a class to train 25 HACCP specialist and practical specialist (Appendix 4: Table 1)

Duration of training is 5 days, from 26-30/5/2003

Through training course, members have a deep and specialist knowledge about how to build and implement a HACCP and SQF plan. Beside, the trainees learn how to build a strategy for quality control; which outlines to the leader of offices the necessary conditions to operate and manage system of quality standard in production to ensure safety and hygiene food and environment and protection.

After training course, SGS company organizes to check. Duration of checking divided to into 2 phases

- Theory test: 60 minutes duration. Take a practical test after achieved the theory test.

- Practical test: 1 week duration. Training class was divided to 4 practical groups. Each group build HACCP plan for area of Panga catfish pond-culture, cage culture, giant fresh water prawn culture and factories, then submit for SGS company to score.

As a regulation, at least 70% result of marks is meet requirements. As a result, 25/25 member of this course were assessed and certificated as HACCP and SQF specialist by SGS in Australia.

### ***Step 2: Edit practical rules.***

3 days duration from 4-6/02/2004

Measures: Board of editing includes quality experts of seafood exporting processing enterprises and head committee (set up decision is enclosed). At the same time, members of step 1 and some staff of Administration committee are divided to 3 group for profiling the Practical rules for Tra catfish pond-culture, cage culture, giant fresh water prawn rice-culture (Appendix 4: Table 2)

Result: Finished 3 drafts of Practical Rules for comment from lecturers of SGS Viet Nam company. In total, there were 3 rounds of additional comments, and editing board had finished before holding the seminar (The comment sheets are attached appendix of product of project)

### ***Step 3: Reviewing for "Practical rules".***

Measures: Administration Committee organizes the conference for comments to finish draft documents of Practical rules. Participants of conference included expert of Department, Committee, Branch (Professionals), Institute, School, the Fisheries Association and quality experts. There were 50 experts who joined the seminar and commented (Appendix 4: Table 3)

Duration: 1 day ( 30/7/2004)

Through discussion of comment 3 drafts of Practical Rules, participants focused to comment the developing actual state of Can Tho Province (now is Can Tho city), condition of soil environment and water environment, Regulations of safety and hygiene food in aquaculture; pay attention to environment problem, regulations of environment protection, waste treatment is most important...(Appendix: Record of Seminar)

Result: Finished 3 drafts of Practical which are more practical for applying. Also through the seminar, experts commented that we should not continue to build the Practical Rules for Tra Catfish cage-culture, because it is difficult to manage water environment and without effecting waterway traffic..

***Step 4: Edit SQF Master plan and HACCP system***

Duration: 2 days (from 20-21/8/2004)

Measures: 25 trainees were divided to 2 groups (by Administrative Committee) to profile the draft of SQF master plan and were guided by experts of SGS Viet nam company.

SQF Master plan is a plan in which includes all documents related to construction the program of safety and quality management in cultivation area such as: Quality manual, HACCP plan, prerequisite conditions, SSOP hygiene procedure, forms of implementing the plan, sheets of guidelines, work description, noting books, input of product checking, human resources, the training and working of staff, technical process applied, the process to approve the suppliers, customers and the most important were regulation of government about quality, safety and hygiene food in fisheries, the commitment of leaders in implementing the quality management program in farm.

SQF master plan also includes assignment responsibility of construction and supervision of implementing this program

Then, each group presented in front of all members to get comment by other groups and experts of SGS Viet Nam company, and each group assigned together to complete the draft for Administration Committee and Head committee was reviewed, adjusted before submitted to SGS Vietnam company for implementing the next step.

Result: Project completed 2 document of SQF Master plan which was submitted by this program.

***Step 5: Gather Quality manual and Practical Rules***

Duration: 1 day (1/9/2004)

Measures: Administration gathered Quality manual and Practical Rules which were edited and received comments from relative offices, institutes, school as Department of Science and Technology, Commerce Department, Fisheries Association, College of Aquaculture of Can Tho University, aquaculture households, Economical Office of districts, fisheries professional staffs of districts of Can Tho province (now is Can Tho city). Departments and Professions contributed their ideas directly to the draft, Editing Committee was responsible for collecting all drafts which contained additional ideas and were corrected by each group.

Result: Administration Committee collected the corrected draft and submitted Department of Agriculture and rural development which is the most senior professional

Leader to research for approval signing so that all records have legal value and were submitted for reviewing and additions by SGS Viet Nam company

**Step 6: Review documents of quality manual**

Time: 9/2004 – 12/2004

Measure: Editing group and experts of SGS Viet Nam company reviewed documents of quality manual, prerequisite program, and HACCP plan. They contributed their additional ideas to improve in accordance with proposed content and for application by farmers through testing and assessment.

In 4/2005 Administration Committee coordinated authorities at districts and suburban district to choose 4 locations for testing and assessment

- Pond culture of Tra catfish: Vo Van De household (Thoi Thanh, Thoi Thuan, Thot Not district, CT city) and 15 hectare of catfish cultivating of Song Hau farm (now is Song Hau Agricultural Company. Thoi Hung commune, Co Do district, CT city)

- Giant fresh water prawn culture: Tran Van Ngoi household, at Song Hau farm and Vo Van Son household (Thanh My, Vinh Thanh, TPCT)

The specialists who participate in the project went to each household to exchange information and guide to note Log of pond, encouraged farmers construct pond of waste water and mud treatment; associated with fisheries extension program of City, each household (apply SQF1000<sup>CM</sup>) was supported 01 quick test of environmental factors such as pH, O<sub>2</sub>, NH<sub>3</sub>, in order to test environment daily.

Experts of project came to supervise regular monthly

To 9/2005, thanks for experts of SGS Viet Nam tried to evaluate.

**Step 7: Profile Training Book**

- Experts of SGS Viet Nam profiled quality training book based on HACCP

- Objective: Provide farmers some basic concepts about quality, customer's demands for food, how to recognize potential risks in manufacturing as well as the way of construction and implementation a quality management system in line of food production.

- Members of editing group of SQF project profile technical training book depending on professional qualification, practice and international standard, standard of Profession and Viet Nam about safety, hygiene food culture.

- Objective: Provide farmer's process of technology associated with environment protection and ensuring safety, hygiene food for sustainable development.

**Step 8: Training "SQF1000<sup>CM</sup>" lecturer**

There were 20 trainees who joined training and lectures (due to some from beginning chosen trainees had changed their task, divided province so the number of trainees decreased as compared with the draft of project)

Duration: 2 days (from 17-18/01/2005)

Contents of training: Quality training book and technology training book as edited in step 7

Method of training: Experts of SGS company lectured 2 sections of contents for the whole class. Members discussed to add necessary and actual contents in 2 of these sections. Then, trainees were organized to deliver lectures and were critiqued about

their manner of lecturing, suggestion for discussion of class as well as bringing related questions for each member to exchange and learn from experience of training and teaching.

Result: After trying to lecture, members improved their knowledge of quality, technology of aquaculture in accordance with quality standard and safety, hygiene food., beside, they improved their professional skills in transferring knowledge to aquaculture farmers and their trial lecturing met the proposed requirements of SGS experts.

***Step 9: Train internal assessment specialist***

Duration: 2 day (19-20/01/2005)

Contents: SGS experts deployed regulations, order and procedure of conducting an internal assessment or official assessment. The most important part was the plan and content of assessment.

Measures: Found a delegation of internal assessment experts which included meeting standard regulation members, title of each member, clearly assignment about plan, contents, expected time and cost of assessment. Also through training course, SGS company guided procedure and standards to submit for a certificate of internal assessment specialist of SQF.

Result: When final test was organized, there were 18 trainees took exam (due to 2 officers were busy at work so that couldn't join the test). In the result of first stage, there were 10/18 trainees passed and certificated. In the second stage, test was organized again on 6/9/2005, there were 6/10 of the rest of the trainees achieved certification.

If trainee passed all tests from the beginning of project, each member would receive 4 certificates: HACCP practical specialist, SQF 1000-2000<sup>CM</sup>, Internal assessment specialist, Specialist of application guidance and lecture.

After Administration Committee had finished 9/10 of steps, they suggested and was agreed to allocated more costs to coach farmers about technology of aquaculture in accordance with SQF 1000<sup>CM</sup> standard by Department of Science and Technology.

In 4/2005, 2 classes were held with 100 participants, 4 locations were chosen for aquaculture in accordance with SQF 1000<sup>CM</sup> in order to try to evaluate and learn from experience for applying step 10 as follows as the draft (There were 2 locations at Song Hau farm: Tra cat fish culture and giant fresh water prawn culture, there was 1 location of shrimp culture at Vinh Thanh and 1 location of tra catfish culture at Thot Not). To 9/2005, an expert was suggested to try to undertake the evaluation by the Administration committee.

Through the trial assessment, SGS expert contributed their ideas for households to learn from experience to culture according to the technical requirements and to complete record documents correctly according to proper standards.

At the same time, Song Hau farm and seafood exporting processing company – CATACO self-contributed expense to organize more 1 class of training HACCP and SQF practical specialist for their officers from 28/11- 02/12/2005. As the result, there were 24 trainees certified.

After that, According to the suggestion of Aquatic medicine company, aquatic feed company, aquaculture households and seafood exporting processing enterprises, Administration continued to coordinate with SGS company and hold more 1 class of

training HACCP and SQF practical specialist from 16 – 20/1/2006, 21/21 trainees achieved certification.

In 5/2006, Administration committee coordinate with Caseamex-seafood processing joint stock company – under Cataco company and some Tra catfish household, banks, Aquatic medicine company, aquatic feed company, Fisheries association conducted the first conference of Establishment the link in Tra catfish production between Casaemex company and 36 households of cultivating with 30.000ton/years product of raw material. Head of Linking Committee included 6 members was elected.

In 11/2006, the first Stage of project was reported completely, finished correcting Quality Book, HACCP plan, programs and forms for farmers implement 10 steps accordant to the draft

In 12/2006, Administration committee negotiated with SGS company about cost of assessment for certificate to implement Step 10. But some problems of increasing cost as compared with the original estimation of the draft budget. Therefore, Administration committee continued to conduct for farmers and seafood exporting processing enterprises according to the trend of encourage the establishment of link, and the links self-paid the cost of certificate assessment for SQF1000-2000<sup>CM</sup> standard achieved as Step 10.

***Step 10: Evaluate certificates.***

Viet Hai seafood processing company and Cafatex company were certified as achieving SQF 2000<sup>CM</sup> standard respectively in 2005 and 2003.

Song Hau Farm thanks to the support of the initial trial evaluation of the project, implemented manufacturing in seafood processing according to SQF and was evaluated for certification. The Sohafood-Seafood processing factory achieved SQF 2000<sup>CM</sup> standard, and 15 hectares of exporting tra catfish culture achieved SQF1000<sup>CM</sup> standard in 6/2006

Caseamex seafood processing joint stock company-under Cataco company was awarded the certificate that it achieved SQF2000<sup>CM</sup> for factory and SQF1000<sup>CM</sup> for 55 hectares of tra catfish culture area linked to factory in 12/2006

Thus, from the time of project implementing in 2003 to now, 4 processing enterprises were evaluated and certified that they achieved SQF2000<sup>CM</sup> standard, reached 133,33% as compared with the draft (3 enterprises), and 70 hectares of Tra catfish pond culture was certified for SQF1000<sup>CM</sup> achievements.

**In summary, fisheries SQF project of Can Tho had conducted since 5/2003 and achieved some certain results follow as:**

- For 4 years of implementation, the project has contributed to change the perceptions of people in manufacturing, doing business and processing seafood according to the trend of production of quality goods, safety and hygiene food, environment protection which accorded to international standards, met timely the preparation before, during and after Viet Nam joined WTO.

Trained:

- SQF practical specialist: 70/70 trainees met requirements of test
- Lectured: 20 trainees

- Internal assessment specialist: 10/20 trainees met requirements of test

#### Technical Developmentt:

- Practical Rules of Tra catfish pond culture and alternative culture of giant fresh water prawn in rice-field.
- Quality manual: Program of management of quality and safety for farm.
- Quality training manual:
- Technical training manual of tra catfish pond culture and giant fresh water prawn alternative culture.
- HACCP plan in aquaculture area
- Guidance of working form, procedures, storage records, reference materials

#### Certification:

- There are 4 aquatic products processing companies in the project area certified standard SQF2000;
- There are 70 hectares fish farm in the project area certified standard SQF1000.

#### Other Achievements

- Till now, 5/ 2009, the project has continued to develop and guide fish farms of the aquatic products processing companies in Can Tho city, Vinh Long and Hau Giang Provinces. Plans to offer Vietnam SGS Company for inspecting, evaluating and certificating in late 2009 have been prepared.
- Improved skill of fisheries officers who joined the project and farmers. Trained the farmers familiar with cultivating according to technical process and legal regulations, to ensure safe and hygienic food, environment protection and to satisfy the requirements of world economic integrating after VN had joined WTO.

## CONCLUSIONS AND SUGGESTIONS

### 1 - Conclusions:

*SQF project of Can Tho has contributed to raising the perception of quality and safety products of aquaculture households*

There were 4 enterprises Caseamex, Việt Hải, Cafatex, Sohafood (Song Hau farm) certified that achieved SQF 2000<sup>CM</sup> standard and 70 hectares of tra catfish culture was evaluated certify that achieve SQF 1000<sup>CM</sup> standard.

The project trained a force of quality practical specialist accordant to HACCP, SQF 1000-2000<sup>CM</sup> standard (70 persons), SQF internal assessment (20 persons) and training lecture (20 persons)

Practical rules, Quality manual, HACCP plan, Quality training manual, technical training manual of giant fresh water prawn in rice field, tra catfish culture in pond accordant to stipulated standard of HACCP and SQF were finished.

### 2- Suggestions:

*To be able to culture aquatic animals for food safety and quality, and for aquatic products to meet requirements of food processing as well as protect environment for sustainable development, proposal:*

- Professional offices suggest People's Committee issues guidance document of implementation aquaculture accordant technical process which is guided by Profession offices, ensure safety and hygiene food accordant to GAP, SQF1000<sup>CM</sup>...

- Functional offices such as: Environment department, Management committee of industrial zone, district and suburban district need to take note of suggestions to construct waste water and general waste treatment systems and to suggest the authorities to issue regulations on condition of construction of waste treatment separated areas before being allowed to work manufacture and business in each field.

Functional offices need to propagate, deploy, mobilize, educate and handle infringements of the general environment protection for all sections of officers, soldiers, people, offices, organizations, individuals who join manufacturing and doing business in all fields

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