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CONSUMER REPORT

- On preferences for fish in a Danish CSA in Copenhagen

Background

An important part for expanding the aquaponic food production is the demand side – the consumers. However, consumers are a very broad concept with many individual preferences on food, price, taste and customs. Likewise, consumers are also dependent on structural conditions such as income, consumption patterns and options for purchasing between different distribution channels and outlets all competing for the consumers' trade-off' on time, leisure and basics needs of food.

For a food producer to get access to modern supermarket channels today requires first of all, the ability to provide a regular supply. Secondly, the producer needs to be able to provide with the necessary 'critical mass of supply' – meaning a certain volume of interest for the supermarkets. For a producer this would normally require substantial investments in production equipment, food safety requirements, storage or packaging all increasing the risk of investment that follows in the wake of such.

In aquaponics these investment cost and associated risks would normally be larger than for other food producers specializing within either aqua- and/or horticulture. The reason for this is firstly, the production dependency between the fish and plant production in a classical aquaponics system makes each production system much more vulnerable if a shot-down occurs due to a disease or a pest attack. Secondly, the management of different biological growth systems having different cycles for harvesting makes the investment risks even higher for an aquaponic entrepreneur if entering a more large-scale commercial market demanding regularity in deliverance and uniformity on products.

Due to these present obstacles limiting aquaponic producers from going large-scale explains to a high degree why the production scene are mainly characterized by small-scale DIY systems. Typically small-scale DIY systems, which are often based on low inputs on capital and technology investments, but high on labor time/cost requirements.

Because of these present conditions on the supply side, it was decided that a consumer study would be more valuable if it was targeted smaller local or alternative CSA (Community Supported Agriculture) markets with the potential of an easy access for local aquaponic products.

The 'KBHFF' CSA as the market study

In the heart of Copenhagen there is a CSA called 'Københavns Fødevarefællesskab' (KBHFF) [English: Copenhagen Food Community], which have been existing for some years now and organized in different localities of the city. It has around 1.500 members, where some are very active and purchase a food bag every week, where others are more 'passive' and purchase on and off. All 1.500 members were targeted for a questionnaire through their website on preferences and willingness to buy fresh fish. The delimitation and focus on fish only in the questionnaire were made since the prospect of being able to purchase local fresh herbs and leafy vegetables all year round from an aquaponic production, was regarded very positive for the CSA. Presently their food choice and purchasing was from peri-urban farmers, which made the variety of vegetables during the winter season very limited. Marketing of fresh leafy greens all-year-round was therefore not considered a market obstacle. The insecurity went on consumer preferences within the CSA in relation to the prospect of being able to purchase fresh fish from an aquaponic production

The size of the consumer group and the easy access for distributing a questionnaire could therefore provide a fair amount of valuable data. Since fish, be it fresh or frozen, are not an option for the members of KBHFF, it could therefore be a potential market opportunity for a local aquaponic producer.

The CSA (KBHFF) is a member-based and member-driven food cooperative. It describes itself as an alternative to the ordinary profit-driven supermarket chains focusing on offering organic and biodynamic products in season with lots of taste and quality at affordable prices (www.kbhff.dk).

For the KBHFF consumers' "influence" is not just the opportunity to choose between different brands and groceries. In KBHFF, the customers are members, owners and co-workers.

As a member you can buy cheap, locally produced organic fruit and vegetables every week. All members are expected to put in three hours of work in the Coop each month. This could be packing vegetables in the shop, ordering vegetables, arranging debates, fixing the website, etc.

As co-owners of KBHFF, all members have a say in the operation and development of the Coop. All decisions regarding the products and economy are taken by the members of KBHFF, and every member has the opportunity to influence these decisions.

This structure can make decisions longsuffering, and in some cases difficult to cope with for a producer of perishable food products. Similarly, the type of consumers dedicated to CSA's can also have certain bias to 'foreign' fish like Tilapia, and have more positive preferences to a perception of 'local' varieties. In a Scandinavian context this could be fish species like Trout and Pike Pearch, being one of the reasons for the fish species chosen in the questionnaire.

Anyone can become a member of KBHFF. Membership costs 100 DKK (13,50 Euros) . As a member of KBHFF, you can buy a bag of organic fruit and vegetables in our shops every week. You do this by pre-ordering your bag in one of the KBHFF shops. The price of one bag is 100 DKK. The weekly bag typically contains 6-8 kg of locally produced and seasonally based organic fruit and vegetables.

A typical weekly bag in the autumn could be apples, salad, leeks, beets, potatoes, celery and carrots. A kilo of each. All of it fresh organic or biodynamic produce from local farms.

The rule is that you always have to pay when you pre-order. KBHFF buy from the local farmers based on the number of pre-orders they get each week, and they pay with the money they received the week before. The member can pre-order for several weeks at once, or just for the following week, and there are no obligations to buy a certain amount of bags per month.

Around 5-600 bags are sold regularly per week being in the low end when summer holidays commence. So some members of the 1.500 purchase only every second or third week.

The questionnaire

To get as many members to answer, and in the same time get a valuable overview of a willingness to purchase fresh fish from this specific CSA market, the following questionnaire (placed in Appendix) was designed in cooperation with the purchasing group in KBHFF for the website.

The questionnaire starts with a short introduction on the four types of fish that potentially could be supplied from an aquaponics system, and already produced by IGFF (Tilapia, Red and Silver, Baramundi, and Pike Pearch). Likewise, their expected price level and type of deliverance such as filet or a whole fish were included.

The questionnaire is then followed by five simple questions on:

1) How often the member would like to purchase fish
2) How many people are in the household
3) Do the member mainly prefer the fish whole or filet
4) Have the member ever tasted the listed four fish before
5) Which locality of the CSA does the member belong to

Results

466 out of the 1.500 members responded to the questionnaire matching closely to the number of bags sold per week.

55% said they were interested in buying fish

12% where not sure

13% opposed directly

20% were not specifically pro or against, but supplied instead with explanatory comments.

Among those 20% some responded positively to the option of purchasing fish, but not every week. Others were only interested if it was fillets, or if only whole fish could be provided, a course should be provided on how to fillet a fish.

Some did not know the fish species presented in the questionnaire, and a few presented themselves as vegetarians/vegans.

A few replies were simply against fish.

Within KBHFF there is among the members already a fish group trying to promote fish for sale in the CSA. They informed that before X-mas 2014 they made a sales offer selling organic trout. Only 38 fish were ordered and sold. One explanation for this they said could be that the distribution center of KBHFF does not have any cooling facilities making it more complicated for the members to handle fresh fish. The whole distribution and packaging is based on the members own volunteering and handling of the various food commodities. So structural barriers of the CSA packaging facilities could have some influence on the respondents.

The result of the questionnaire indicates that for any aquaponic producer to start up selling fish to a local CSA – especially species less known to the public - it would be a good idea to do some promotional initiatives like pre-visiting the aquaponics production, showing and informing about the products and turning visits into an event for information and sales. Similarly, cooperation with the CSA on setting up educational courses on the various fish species, filleting and providing cooking recipes would be good for increasing potential sales. Likewise, for the producer, it is crucial to understand the organizational structure of a CSA, its procedures for decision making and arrangements for payments and/or credit period.

In this regard, a new questionnaire to the members of KBHFF is planned to be made, but targeting one of the 'high-end' consumer localities of the CSA. Likewise, a pre-visit tour to the IGFF aquaponic test plant has been arranged with this locality for both learning about this new production system, seeing the fish and the related horticultural produce hence making the visit an event tour with direct sales of fish, herbs and specialty vegetables such as black and white peppers, purple chilies and Thai basil.

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APPENDIX:

The on-line questionnaire to 1.500 members of the Danish CSA KBHFF (in Danish)

Spørgeskemaundersøgelse blandt medlemmerne af KBHFF:

Interesse for køb af fersk økologiske fisk opdrættet i Danmark

Spørgeundersøgelsen introducerer kort de fire fisketyper, som vil kunne tilbydes, forventede prisniveauer samt leveringsvilkår. Herefter følger blot fem spørgsmål, som kan besvares med et kryds omkring præferencer for køb og type af fisk:

Type af fisk:

Barramundi er en saltvandsfisk rig på omega-3, proteiner, vitaminer og mineraler. Smagen er mild og en smule sød. Konsistensen er som andre hvidfisk, og kan tilberedes ved stegning, koges eller grilles.

Tilapia (rød) er en ferskvandsfisk og meget smuk når den serveres som hel fisk grillet eller stegt. Kødet indeni er en hvid fisk med en mild smag.

Tilapia (sølv) er en ferskvandsfisk. Kødet er en hvid fisk, mild i smagen og derfor anvendelig til mange retter, hvor saucen (eksempelvis tomat, karry, kokos etc.) bliver den primære smagsfremhæver. Meget populær i USA pga. sine mange anvendelsesmuligheder bl.a. i børnefamilier.

Sandart er en luksus ferskvandsfisk og meget kendt i Tyskland og Central Europa på restauranter. Det er en hvid fisk og anses for en af de bedste spisefisk fra ferskvand. Den hører til Aborre familien, og vil i smagen ligge tæt herpå.

Priser:

FISKE TYPE	**HEL**	**FILET**	**PRIS**
Barramundi		X	115 kr./kg
Tilapia (rød)	X		45 kr. for 600 gram
Tilapia (sølv)		X	60 kr./kg
Sandart	X	X	90 kr./kg hel fisk

60 kr. for filet á 600 gram

Leveringsvilkår:

Fiskene er præ-pakket og klar til individuel levering. Medlemmerne skal derfor IKKE sortere og pakke fisk.

SPØRGSMÅL OG AFKRYDSNING:

1) Hvor tit vil du gerne kunne købe friske fisk i KBHFF? Sæt kryds (X)

En gang om ugen	hver 14 dag	En gang om måneden	Andet
( )	( )	( )	( )

Hvis andet, skriv dit ønske ______________________________________

2) Hvor mange personer findes der i husholdningen? Sæt kryds (X)

1 ( ); 2 ( ); 3 ( ); 4 ( ); Flere ( )

3) Foretrækker du overvejende fileteret eller hel fisk? Sæt kryds (X)

Fileteret ( ) Hel ( )

4) Har du prøvet at spise nogle af de fire ovennævnte fiske typer før? Sæt kryds (X)

Ja ( ) Nej ( )

Hvis kryds i ja, skriv hvilke (navn/navnene)

a) Kunne du tænke dig at prøve ovennævnte fisk selvom de er ukendte for dig?

Ja ( ) Nej ( )

5) Hvilken afdeling hører du til?

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