Fish farming in Finland
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Farmed fish is sustainable local food

In Finland people love fish. However, most of the fish consumed in Finland today is imported from abroad. Locally produced fish would be a more healthy and environmentally sustainable choice. Fish farming enables us to enjoy delicious and locally produced fish all year round.

Finnish fish is quality food. It is produced in optimal conditions ensuring proper fish health and well-being. The main objective of fish farming is to put healthy and locally produced food on the table of the consumers in Finland.

Farmed fish is an ecological and ethical choice. The carbon footprint of farmed fish is small; actually it is smaller than that of any other form of animal production. The entire production process is sustainable: in addition to fish well-being, the employees’ working conditions and occupational safety are well taken care of.

About 15 kg of fish per person

There has been a steady growth in the fish consumption in Finland. However, the share of Finnish fish in this consumption has gone down considerably. The total fish consumption in Finland amounts to approximately 15 kg per capita annually, of which less than four kilos is produced in Finland.

The fish consumption has mainly grown owing to the increasing share of imported fish. In 2011, approximately 106 million kilos of fish was imported to Finland from abroad (Figure 1). The main country of origin is Norway. The consumption of cultured salmon from Norway in Finland exceeds that of all domestic fish taken together.

The share of cultured fish in Finland’s total annual fish consumption is only about one kilo per person. Domestic production of cultured fish could not be increased despite the growing demand, since there are strict regulations regarding fish farming in Finland. An increase in production volumes would enable a more widespread use Finnish fish.
Figure 1.
In Finland, the consumption of domestic fish has come down during the last 30 years (percentages indicated in blue).
Fish farming as livelihood

Finland offers excellent conditions for achieving self-sufficiency* in fish production, since the country has a long coastline, long rivers and thousands of lakes. Fish farming is a more significant source of livelihood in Finland than in other European countries on an average. Fish farming creates jobs and brings a living to the residents of the archipelago and other places farther away from the urban centres.

Fish farming is a considerable player in the natural resource economics in Finland. As a livelihood, fish farming is particularly important and helps maintain jobs and services in remote places.

Finnish fish farmers are innovative and highly competent professionals in their own business. Finnish research in aquaculture is at the forefront of all European countries. Fish farming requires versatile know how and constant research and development. The farming methods are chosen carefully in order to ensure well-being and healthy growth of the fish.

History of Finnish fish farming

The first fish farms were founded in Finland in the latter half of the 19th century. Hatcheries arose along major salmon rivers where the eggs from brood stock caught in the wild were taken and larvae hatched. The newly-hatched larval salmon were transplanted into natural waters to restore natural fish stocks.

Commercial fish farming started in the late 1950s in Finland with hatching and cultivating salmonids in ponds. The strongest boom of Finnish fish farming took place in the 1960s when the industrial production of rainbow trout first started.

Over the last four decades Finnish aquaculture has experienced a major change. The formerly small business became a considerable player of the Finnish fisheries industry. Farming methods became more efficient and mechanised, and fish farming was taken from the traditional earthen ponds to larger production facilities by the sea.

The production of cultured fish reached its peak in the 1980s. Fish farms were founded in large numbers, and the fish farming industry grew rapidly. The growing supply of cultured fish enabled

* Self sufficiency indicates the share of domestic production in the total consumption. If the production equals to the consumption, the self sufficiency rate is 100.
“The first fish farms were founded in Finland in the latter half of the 19th century. Hatcheries arose along major salmon rivers where the eggs from brood stock caught in the wild were taken and larvae hatched.”
the development of the domestic fish-processing industry and fish market. The fish farming industry also grew owing to the advances made in fish farming technologies, such as the introduction of industrially produced dry feed.

After the boom, the environmental permit procedure in aquaculture grew stricter, and the production volumes of cultured fish were cut. Thereby the environmental load from fish farming was considerably relieved, thanks to the active research and development work carried out in the field. Cutting production volumes caused the number of fish farms to go down. As domestic production was downsized, the growing consumption shifted more and more towards cultured fish imported from abroad.

**Fish farming is subject to licensing**

In Finland fish farming is a strictly regulated and supervised activity. The purpose of the supervision is to secure the well-being of the environment, the fish and the employees. Fish farms must have a fish farming licence based on the Environmental Protection Act. In addition, the Water Act prescribes a building permit for structures in water areas. The activity of a fish cleaning facility or any other fish-handling facility is also subject to licensing.

The permit documents contain detailed regulations on the areas to be used for fish farming, the production methods and volumes of aquaculture. The operation of water treatment systems at fish farms is controlled by environmental permits and regular inspections. In addition, fish farmers are obliged to carry out self-monitoring and keep detailed records of their activities.
Fish farming enterprises in Finland

The number of fish farming enterprises has dropped considerably since the 1980s, as the criteria for obtaining environmental permits became stricter and restrictions were introduced on production. All this had an adverse effect on the profitability of the business. The production volumes of farmed fish were nearly halved from the peak years.

There are currently about 170 fish farms in Finland, plus some 200 natural pond entrepreneurs. These are mostly small businesses. The industry employs approximately 500 people. Fish farming is a side business or a second profession for many of the entrepreneurs.

Active business development

Fish farmers are eager to develop production methods and techniques. Systematic development work is required in order to adapt the farming process to optimally suit different fish species and production techniques.

The principles of sustainability and high ethics are observed in fish farming. Environmental matters, food safety and fish well-being are considered in the production. The activity is regulated by animal protection and environmental protection laws and by rules on the protection of farmed fish and labour. Environmental and socio-economic obligations are considered in fish production methods.

Fish farming as a profession

A fish farmer must have extensive knowledge of fish farming methods. The work involves a lot of responsibility and variability. Fish farming requires diligence and good physical condition. One must be highly proficient in facility hygiene and fish handling. In addition, insights into entrepreneurship, marketing and sales will be necessary. The work schedule varies a lot, since fish farming has a seasonal character.

Vocational qualification in the fisheries industry may be acquired in corresponding establishments of secondary education. The qualification can also be acquired at apprenticeship training and as competence-based qualification. A professional fish-farmer’s qualification can also be acquired as competence-based qualification. Education in natural resources can be received at universities of applied sciences (polytechnics).

At universities, higher education can be obtained in biosciences and environmental sciences and a Master of Science degree protected in philosophy. Students may choose to specialise in fish biology and fisheries as well as in hydrobiology and limnology.
Fish farming has potential for growth

The world population is growing, and food production should be doubled in the next couple of decades. Fish farming is a method that enables the production of quality food in compliance with the principles of sustainable development and responsible food production. By means of fish farming the over-harvested pelagic fish stocks can also be strengthened.

The global demand for fish exceeds its supply. This means that the growing demand cannot be satisfied by means of fishing alone. Aquaculture has an important role in food production: already today, half of all consumed fish is cultured. It is estimated that by the year 2030 the share of cultured fish will have increased further still, so that most of the consumed fish will be produced aquaculture methods. On the global scale, fish farming is the most rapidly growing branch of the food industry.

Utilising the growth potential of aquaculture is also vital to the Finnish economy and food production. The purpose is to create proper conditions for increasing production volumes in an environmentally and financially sound way, ensuring that Finnish fish farming can also be a profitable business in the future. In addition, export activity offers considerable potential for future economic growth of the Finnish fish farming business.
Growing restocking fish

Fish farming puts food on the table, but fry production for restocking at fish farms can also help save and strengthen endangered fish populations.

Many precious fish populations have regressed due to changes in the water systems. The heaviest losses were suffered by Finland's most valuable fish populations: the migrant salmonids. Restocking is a rational way to remedy for the losses caused to fish populations by adverse changes in the water system that prevent the fish from reproducing. Restocking fish are cultivated also for strengthening existing fish populations and creating new fishing reserves.

For restocking purposes broodstock are caught from the wild endangered fish populations. Their eggs are let to hatch in the incubators and the offspring are transplanted into natural waters. Restocking fish are grown in their natural environment with the ambient stimuli. This will reduce stress and improve the immunity of the juveniles against disease and help them survive in natural conditions.
Fish farming is an ecologically effective form of food production. The carbon footprint of cultured fish is considerably smaller than that of any other form of animal production. The “carbon tail print” of rainbow trout is only about one sixth of the carbon footprint of beef production (see figure below). The carbon footprint of pork and poultry production is double that of rainbow trout.

Fish farming is one of the most environmentally friendly methods of producing animal protein. Fish farming is the only business in Finland that has reached all of the environmental targets set for it – even ahead of schedule. On the one hand, the high standards of water protection and fish well-being raise production costs, while on the other hand these enable maintenance and further improvement of the sustainability of fish farming.

Active water protection

Water protection is an integral part of contemporary fish farming. Fish farmers are constantly looking for new ways to minimise environmental impacts. Finnish aquaculture is the only business to have reached the environmental goals set by HELCOM, the Baltic Marine Environment Protection Commission (also known as the Helsinki Commission). In addition, the national water protection targets for reducing the environmental load were attained in fish farming by the year 2005.
When assessing the environmental impact, regular water monitoring is an important tool. Constant monitoring and documentation helps both fish farmers and environmental authorities to constantly receive updated information on the effects of fish farming on water systems.

Small load on water systems

The main environmental impacts related to fish farming are caused by the nutrient emissions from fish feeds. Phosphorous and nitrogen compounds are released in the water from fish feed and excrement. However, the impact of fish farming in the overall load on water systems is quite small. Less than two percent of the nutrient load on the water systems comes from fish farming.

In the main fish farming area of the Finnish archipelago, three percent of the phosphorous load, and two percent of the nitrogen load originates from fish farming. The nutrient load from fish farming has reduced by 70% from the levels of the beginning of the 1990s. The lifecycle phosphorus emissions from the cultivation of Finland’s most common cultured fish, the rainbow trout, were reduced considerably due to the introduction of a new low-phosphorous fish feed.
Sustainable food production

Fish farming is a sustainable way to produce food. Fish farming is an ecologically effective form of food production. Of all forms of animal production the carbon foot print of cultured fish is the smallest, since, as poikilothermal animals, fish are capable of utilising their feed more effectively than homeothermal farm animals.

Fish farmers are constantly improving the fish feed, feeding methods and fish farming techniques. Owing to this development work the ecological efficiency of fish farming has improved considerably. Today, one kilo of feed gives one kilo of fish (see figure below).

Feed utilisation by form of animal production.
Production process of fish farming

Finnish fish farming involves moving the fish from inland waters to the sea: the offspring are raised in inland waters, and the fish are grown out for food in the sea. This happens at fish farming facilities, fish farming cages, earthen ponds, natural cultivation ponds and recirculation aquaculture systems.

There are many different types of fish farm production facilities. The composition of the facilities depends on the water area and the fish species to be raised. Especially in inland waters, fish farming facilities often comprise a combination of facilities of many different types.

Most of Finland’s edible fish is raised on Aland and in other pelagic areas. In inland waters there are also lots of natural ponds used for producing offspring.

Fish health and nutrition guaranteed

Only healthy fish can produce quality food. Fish farmers put in considerable effort to ensure good fish health. The offspring hatch and grow in clean water and their feed is chosen carefully. Good preconditions for growing ensure fish well-being, and the fish farmers’ strong professional skills guarantee high quality of farmed fish.

Experienced fish farmers recognise any changes in the condition of the fish and adjust the growing process accordingly. At fish farms work is done seven days a week. The work of highly skilled and dedicated fish farmers translates into quality offerings of fish at the local supermarket.

Fish health is properly ensured in Finland. Fish diseases are fought at the fish farms by vaccinating the fish and using good farming practices. Owing to these preventative measures, the use of antibiotics in the welfare of fish in aquaculture can be brought down to the minimum.
The basic ingredients of fish feed include fish powder and fish oil. No fresh fish from the sea must be used for fish feed. Apart from the fish powder and fish oil, fish feed may contain vegetable oil, soya-based products, wheat or corn gluten, pea plants and ground sunflower. Vitamins and minerals are added to the feed.

Pond cultivation of fry and brood stock

In Finland, fish fry are produced in the approximate quantity of 35 million pieces a year. The hatcheries require special spaces and buildings and often complex water supply systems. The hatchery facilities typically consist of a hatchery section, a grow-out section and an external pond.

Inland hatcheries are usually plastic or glass fibre reservoirs. Water is pumped into the reservoirs from rivers, lakes or springs.

The brood stock require reservoirs of their own. In the brood stock facilities, the
broodstock are raised, fish eggs produced and offspring hatched from the eggs. Broodstock are usually kept in external reservoirs and the eggs are harvested in a tent set up next to the reservoir.

Hatcheries are often used only for the period of time necessary for the larvae to hatch. The eggs can be harvested from the broodstock grown at the facility or from natural broodstock. Hatching takes place in tubs, hatching troughs or funnels.

When the larvae hatch, they are moved to a separate grow-out section, or to natural ponds. Outgrown offspring are moved to external reservoirs. The offspring are sold to be further grown for food or transplanted to natural waters.

**River bed reservoirs and inland ponds**

Approximately 13 percent of the total production volume of fish farms is raised in river bed facilities, lakes and natural cultivation ponds. In natural cultivation ponds fish are grown, above all, for restocking purposes.

In a lake or river bed facility water from a lake or a river is supplied to the fish farm. These establishments often have earth bottom and they can also be covered with concrete or plastic. The daily feeding and care of the fish is ensured from the shore using suitable means of vehicular traffic.

Natural cultivation ponds are usually ponds dammed from the upstream
waters and equipped for gathering the fish and draining the ponds. The ponds are used in the open water season. Such facilities are mainly used for growing whitefish, grayling and pike perch. The fish are put into the ponds right after hatching and they are kept there over the summer. Often natural cultivation ponds are used for growing restocking fish.

**Fish farming cages at sea**

Fish produced for food is often grown at sea. Nearly 80% of all farmed fish is produced in pelagic fish farming cages.

The pelagic facilities usually comprise a cluster of cages sunk in open waters. At sea, fish are raised for two to three years until they reach sufficient body weight. The growing period depends on both the fish species and the growing conditions.

In pelagic fish farming facilities the first growing phase usually takes place at or near the sea shore, since the fry require constant monitoring. The fry are sorted into larger reservoirs in the autumn or in the spring, and they are moved to a place were they are kept for the second grow-out season.

The facilities for keeping the fish over the winter are planned so that both the production structures and the fish will be protected e.g. from pack ice. The fish are typically grown at least for one more season in order for them to reach a sufficient body weight for the market.

In addition to the farming facilities, a fish farm must be equipped with a fish cleaning station. Feed storages and other service spaces are usually located by the cleaning station. At the fish cleaning station there is a separate place for storing the farming cages and structures for cleaning.

Cage facilities can also be used inland, although water bed reservoirs are more typical facilities for inland use.
Recirculation aquaculture systems (RAS)

RAS with water treatment represent modern fish farming technology. About half million kilos of fish was grown in 2010 in recirculated water. This corresponds to approximately four percent of the total fish production. RAS use state-of-the-art technology that enables indoor closed-circuit recirculation of water used at the fish farm. The process includes water treatment, warming and aeration as options.

In RAS the nutrients generated in the production process can be recovered efficiently. On the other hand, the energy costs are higher than those of traditional production. Since the investment and energy costs are high, RAS are currently used for growing species whose market price is higher, such as pike perch and sturgeon.

RAS production is increasing and new facilities are being planned. There are not as many restrictions regarding the placement of RAS facilities as there are for locating other types of fish farming facilities. RAS facilities are preferably placed in the vicinity of other industrial premises, so that the ready-built infrastructure, affordable energy resources, water preparation and waste water treatment plants can be utilised.
Off-shore aquaculture?

The potential of offshore aquaculture has been investigated, but the conditions in the Finnish maritime area are too challenging for this. In the winter the sea is covered with ice, and during melt waters the wave formation in the Baltic sea is severe. The wave height may vary between seven and fourteen metres. The strength requirements for offshore fish farming structures are higher than for on-shore facilities.

The use of offshore technology adds to the production costs when compared to ordinary fish farming in cages. Offshore farming requires stronger frames, farming cages and anchorage, larger and sturdier vessels and more advanced feeding devices. Introduction of offshore technology still has many open questions, but given active development work, solutions can also be found for the challenges of offshore farming.

Fish cultivated in Finland

In Finland, the fish species cultivated for food include rainbow trout, whitefish, pike perch, sturgeon, trout, and arctic char. In 2012, approximately 11 million kilos of fish was grown for food in Finland. The share of rainbow trout was approximately 95% of all fish produced for food. In second place was whitefish, approximately one million kilos per annum. The share of the remaining fish species grown for food in the annual production volume was approximately 100,000 kg.

Fish species have different requirements for their farming conditions. For example, whitefish are more sensitive than rainbow trout. Whitefish require a quiet place and are disturbed if moved over long distances at sea or by the severity of offshore conditions.
Edible fish is the main product of fish farming

Finnish fish farming is focused on growing fish for food. Its main product is rainbow trout. Cultured fish brings diversity to the fish market offerings and is also widely used in the fish processing industry.

The delicious red meat of rainbow trout

Owing to its positive impact on health, rainbow trout is one of Finland’s finest fish species that is grown for food. Rainbow trout has nice firm meat and a fresh taste. It contains lots of omega 3 fatty acids and vitamins E, D, and D. Rainbow trout has been cultured in Finland professionally since the 1970s. Rainbow trout has a unique role in the history of Finnish fish farming and its fish market. Thanks to fish farming, this healthy, red-coloured fish meat is available for a reasonable price throughout the country. Nowadays rainbow trout is produced in the approximate amount of 10-12 million kilos per year. Two thirds of the production comes from the farms of the Finnish archipelago and Aland.

It takes from two to three years to grow a rainbow trout from the egg to the table. The rainbow trout is harvested for food when it reaches a body weight of one or two kilos.
Tasty and delicious whitefish

The beginning of the 21st century brought another cultured fish species to the Finnish table along with rainbow trout – the whitefish. The farming technique for whitefish and rainbow trout is similar, but whitefish are a more sensitive and demanding fish species than the rainbow trout. Whitefish farming therefore requires more professional skill. Whitefish is a quiet species that does not like being disturbed during the growing season.

Cultured whitefish allow evening out the seasonal changes in the availability of wild caught whitefish on the fish market. The main advantages of whitefish are homogeneity and all year round availability. Cultured whitefish also contains lots of useful fats. Whitefish grown in Finland is an excellent choice for a delicious meal.

The whitefish fry hatch and grow in hatcheries. After the first grow-out season they are transferred to secondary grow-out ponds. Whitefish are ready to eat after one to two additional grow-out seasons when they will have reached the body weight of 600-1000 g.
Pike perch is the king of fish

Pike perch is one of world’s most valuable fish species. The meat of this tasty fish is white, firm, low in fat and practically boneless.

Pike perch grows best in warm water. A warm growing environment can be created in an environmentally friendly way at a RAS facility. The larval pike perch weighing around one gram and corresponding to the length of a match arrive at the farming facility from earthen ponds and they are grown at the RAS facility for over a year. In warm water the pike perch grow twice as quickly as in natural waters.

Pike perch are a demanding fish to grow due to their small fry size and photosensitivity. In addition, this predator is a cannibal that eats the smaller ones of their kind. Therefore, larger fish must be separated early enough from the smaller ones and taken to another grow-out pond.
Sturgeon - a delicacy dating back millions of years

Sturgeon has low-fat, white-coloured meat. It can be prepared in many different ways. It is quick to prepare, and the end result is delicious. Sturgeon fillets are easy to cook, since they are boneless. The firm sturgeon meat is also an excellent choice for the barbecue. Sturgeon eggs – real black caviar – is the most delicious luxury seafood one can think of.

Sturgeon can be justly called a living fossil. Sturgeon belongs to the osteichthyes family (“boned fish”), and its appearance has stayed practically unchanged for the last 200 million years.

Finland used to be part of the sturgeon’s natural habitat. Nowadays sturgeon is farmed at modern RAS facilities in an environmentally friendly way. However, cultured sturgeons are not exactly the same species as the wild sturgeon of the past. The cultured species is Siberian sturgeon originally exported from abroad. In warm water at a temperature of 20 °C sturgeon grows four times as quickly as in the wild. Cultured sturgeon reaches a marketable size at the age of 2-3 years. Caviar can be harvested from sturgeon at the age of 6-7 years.
Delicious fish recipes

Fish is a really healthy super food. According to nutrition specialists fish should be eaten twice a week. Fish has fewer saturated fatty acids than meat. Instead, it contains lots of useful fatty acids, proteins and vitamins. Cultured fish from the domestic fish farms is real local food which is clean and fresh when compared to imported fish. Local fish is also an environmentally sustainable choice. Short transportation distances allow the reduction of environmental impacts and guarantee that the fish is fresh. Cultured fish from domestic fish farms is quality food that is traceable all the way to the fish eggs.

Fish dishes are easy to prepare. Fish is the main ingredient of delicious and healthy meals. Try out some of these delicious fish recipes!
Rainbow trout – chanterelle pie

Dough:

1 1/4 dl of mashed potatoes
125 g of butter or margarine
2.5 dl of wheat flour
1.5 teaspoons of baking powder

Mix the baking powder in the wheat flour. Add the softened butter (margarine) and wheat flour mixed with the baking powder to the mashed potatoes and knead the ingredients into a smooth dough. Press the dough onto the bottom of a 25 cm pie form. Bake the dough in the oven at 200 °C for 15 minutes.

Filling:

5 dl of fresh chanterelles (or 1.5 dl of deep-frozen ones)
1-2 tablespoons of butter or margarine
10 cm piece of leek
200 g of raw-spiced rainbow trout
0.5 dl of cut dill
2 eggs
2 cartons of sour cream
2 dl of grated cheese
1/4 teaspoons of black pepper

Clean and cut the chanterelles. Drain them on a hot frying pan, add the butter/margarine and sliced leek. Toss the ingredients on the pan until the leek softens. Spread the chanterelle and leek mixture and shredded fish and dill onto the pre-baked dough. Break the egg structure and add sour creme, grated cheese and black pepper. Pour the mixture on the pie. Bake it in the oven for 25-30 minutes until the egg mixture has set and the surface has a nice colour. Serve preferably when warm, especially with a fresh salad.
Pike perch, boletus and spinach pasta

300 g of pike perch fillets
1.5 - 2 dl of deep-frozen or 30 g of dried boletus
150 g deep frozen spinach
2 shallots (or 1 onion)
2-3 garlic cloves
3 table spoons of rapeseed oil or olive oil
2-3 table spoons of lemon juice
cia. 1 dl of pasta boiling water
0.5 - 1 teaspoons of salt
black pepper from pepper mill
300-400 g of fusilli or tagliatelle pasta

If you are using dried boletus, soak them in lukewarm water for at least half an hour. Squeeze them slightly to drain extra water and cut the mushrooms. Use the soaking water in the sauce.

Boil the pasta first. When cooked, drain the water from the pasta and take 1 dl of the pasta boiling water to the side for the sauce. Cut the onions, heat the oil in a frying pan or a wok pan. Add the onions and fry them a little. Add the boletus to the hot pan. Fry for a moment and add the defrosted spinach.

Remove the vertical fish bones with two cuts and cut the fillets in the crosswise direction into two cm shreds. Season the fish shreds with salt and add them to the pan. Turn them carefully and season. Pour some of the pasta boiling water into the pan or water from soaking the mushrooms into the sauce. The fish shreds will take only a couple of minutes to cook.

Pour the boiled pasta first into a large heated bowl and mix the sauce carefully into the pasta. If you want, you can serve some parmesan cheese on the side.
Whitefish ceviche

6 portions
300-400 g of white fish fillets
Juice of 2 limes or 1 lemon
Juice of ½ orange
0.5-1 teaspoons of salt
black pepper
3-4 tablespoons of quality vegetable oil
1-2 shallots
small garlic clove
½ - 1 chilli bean (e.g. Anaheim)
1 teaspoons of coriander or parsley
A slice of iceberg lettuce
A handful of rocket leaves
½ pot oak leave or lollo rosso lettuce
1 large tomato
1 avocado
2-3 table spoons of green olives, slices
6-8 boiled new potatoes

Cut the fish fillets into 1 cm slices and then into suitable fork pieces. You can use pike perch instead of whitefish. Put the fish pieces into a bowl. Squeeze the juice from the citrus fruits and pour it over the fish.

Cut the onions, slice the chilli pepper and coriander. Mix them carefully with the fish. Let the fish marinate in the sauce for approximately 2 hours in a cold place. Mix it periodically so that the juice surrounds the fish from all sides. Drain the juice away with a strainer. Season the marinated fish bits with salt and pepper and add the oil. Keep refrigerated until served.

Slice the lettuce, cut the tomato into small cubes and slice the avocado as well as the peeled and boiled potatoes. Spread the lettuce, potato and avocado slices and olives on a serving dish. Put the fish on top. Make a second layer if required. Serve immediately or cool it down a little before serving.
Herb - sour bread -crusted sturgeon fillet

600 kg of sturgeon fillet cuts
   salt
freshly ground white pepper
   Bread crusting:
   1 dl of basil finely cut
   3 table spoons of lemon juice
   40 g of soft butter
   2 dl of rye bread cubes
   salt
freshly ground black pepper

Prepare the bread crusting first. Add the ingredients in a bowl and make a smooth paste with a hand blender. Season the fish cuts with salt and pepper. Put some colour on the fish surface quickly on an oiled pan and put the fish on a baking tray over baking paper. Spread the bread crusting evenly on the fish. Bake in the oven at 200 °C for 10 minutes until the surface has got some colour. Serve with salad or vegetables.
The Finnish Fish Farmers’ Association

The Finnish Fish Farmers’ Association is a nation-wide association representing the interests of Finnish fish farmers. The association was founded in 1964. The Finnish Fish Farmers’ Association promotes the operating conditions of the fish farming business and sustainable growth of aquaculture.

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