

Life cycle of farmed King salmon

SLO: Students learn about the process of King salmon farming in New Zealand and make links between it and the natural life cycle of King salmon.

INTRODUCTION:

King salmon live in both sea water and fresh water through their life cycle. Farming King salmon successfully requires methods that simulate the natural life cycle of King salmon.

WHAT YOU WILL NEED:

- Life cycle information sheet – 1 per student or pair
- Life cycle of farmed King salmon poster
- Life cycle activity sheet (Level 1-2) – 1 per student or pair

Or

- Life cycle activity sheet (Level 3-4) – 1 per student or pair

ONLINE VERSION:

kingsalmon.co.nz/ed/activity6

ACTIVITY:

This activity has been divided into two worksheets. The first is aimed at Level 1-2 and looks at the life cycle of the King salmon and has some questions to answer; then the student can draw their own life cycle. The second is aimed at Level 3-4 and is similar to the first but also includes more information about the farming methods in relation to the stages of the life cycle.

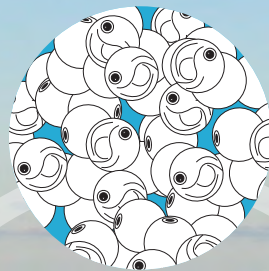




LIFE CYCLE OF FARMED KING SALMON

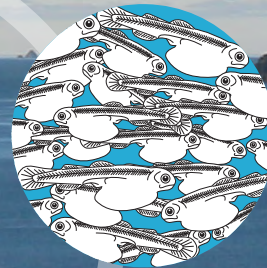
OVA

Ova or eggs are collected at the fresh water hatchery



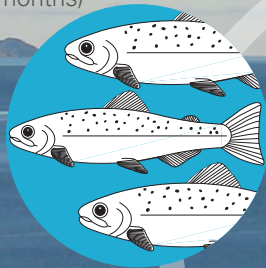
ALEVIN

Alevin are hatched from eggs at the fresh water hatchery



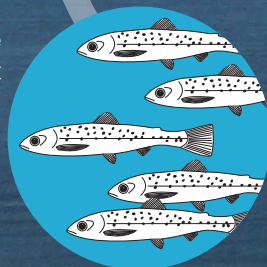
ADULT

Adult King salmon reach harvest size of 4kg in net pens at the sea farms (around 12-18 months)



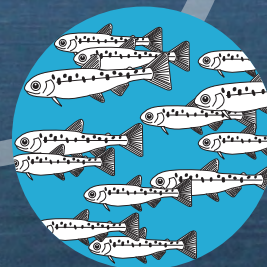
SMOLT

At around 100g smolt are transferred to net pens at the sea farms



FRY

Fry are transferred to outside raceways at the fresh water hatchery



HATCHERY

- The life of King salmon farmed by The New Zealand King Salmon Company starts in a fresh water hatchery.
- Eggs are collected and fertilised by adult King salmon. When the eggs hatch they are called alevin. They still have their yolk sac attached which they use as food.
- Once they have absorbed the yolk sac, they are called fry.
- When they are ready to move to net pens in the sea farms, they are called smolt. At this point they can live in either fresh water or salt water.

NET PENS

- The King salmon smolt is transferred to the net pens on the sea farms in the Marlborough Sounds when they are large enough at around 100 grams. This is when they would naturally migrate down rivers and out to sea if they were wild King salmon.
- The Marlborough Sounds is ideal for growing high quality King salmon. King salmon need cool, deep, clear water with a good current and calm conditions.
- At the King salmon farms, King salmon are fed on a specially formulated, balanced diet until they reach the ideal weight of 4kg. This is usually when the King salmon is 12-18 months of age.

HARVEST

- Once the King salmon reach full size of 4kg they are harvested. A barge is specially set up to harvest the King salmon in a low stress way. The King salmon is then transported by tanker to the factory for processing.

Life cycle of farmed King salmon

Answer the following questions:

1. What are young King salmon called when they turn from an egg into a fish?
2. What is the name of the young King salmon that make the change from fresh water to salt water?
3. What weight are smolt when they are moved from the hatchery to sea farm?
4. King salmon are sea-farmed in which region at the top of the South Island?
5. Draw your own life cycle of a King salmon:

Life cycle of farmed King salmon

1. What are young King salmon called when they turn from an egg into a fish?

Alevin

2. What is the name of the young King salmon that make the change from fresh water to salt water?

Smolt

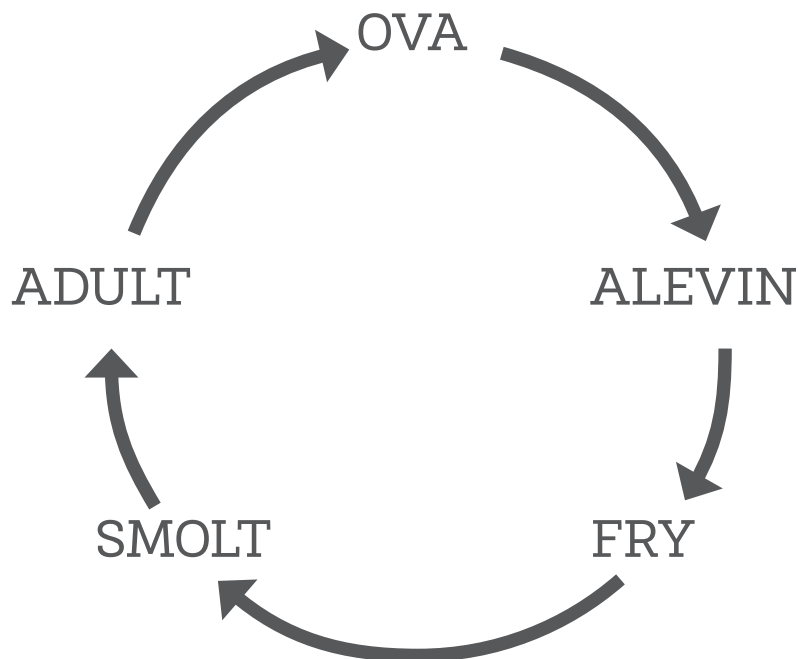
3. What weight are smolt when they are moved from the hatchery to sea farm?

100 grams

4. King salmon are sea-farmed in which region at the top of the South Island?

Marlborough

5. Life cycle of a King salmon:



Life cycle of farmed King salmon

Answer the following questions

1. What is the name of the young King salmon that makes the change from fresh water to salt water?
2. At what stage and weight do the King salmon get transferred to net pens at sea farms from the freshwater hatchery?
3. Where do alevin get their food from?
4. What is the average weight of a King salmon before harvest?
5. What are the ideal sea conditions required for King salmon to be farmed?
6. Draw your own life cycle of a King salmon. For each stage, state whether it lives in fresh water (hatchery) or sea water (sea farm).

Life cycle of farmed King salmon

1. What is the name of the young King salmon that makes the change from fresh water to salt water?

Smolt

2. At what stage and weight do the King salmon get transferred to net pens at sea farms from the freshwater hatchery?

Stage: Smolt – when they could naturally migrate down rivers to the sea, weight: around 100 grams.

3. Where do alevin get their food from?

Yolk sac

4. What is the average weight of a King salmon before harvest?

4kg

5. What are the ideal sea conditions required for King salmon to be farmed?

Cool, deep, clear water with a good current and calm conditions.

5. Life cycle of a King salmon:

