

CHAPTER 8. PLANT WORKERS

A fish plant needs workers to process the fish. As you plan your plant, you should think carefully about how many workers you will need and where you will find them. Finding workers for a village fish plant can be difficult. Even though it's hard to find jobs in most villages, not everyone wants to work in a fish plant.

Fish plant workers have to be willing to work whenever fish are delivered, until all the fish are processed. If there are a lot of fish, the workers may have to work overtime and on holidays, bingo nights or other special days when most people would rather not be working.

You need to keep your costs low enough, so you most likely won't be able to pay your workers high wages. Probably you won't be able to pay much more than other fish plants pay.



If there are other job opportunities in your villages during the fishing season, people may prefer those jobs. The people with the most skills are also the most likely to have a chance to get other jobs. Even if people don't have other jobs they may prefer to go fishing or hunting rather than work in a fish plant.



If you can't find enough workers in your village, you may need to hire some people from outside the village to work in the plant. You may need to pay their travel costs to get to your village, and you will have to find places for them to live and eat while they are working in the plant. This adds to your costs and means more work for the plant manager.

People may quit in the middle of the season. If that happens, you need to be able to get new workers.



Quinahagak Fish Plant processing workers, July 2000



Quinahagak
resident John
Henry packing
fish



Checking
salmon roe

Planning Your Worker Needs

To plan for how many workers you will need, think about all the work that will need to be done in the plant before, during, and after the season. Think about the different kinds of jobs or positions for which you will need workers and the kinds of skills workers will need for each position. Based on when you will be processing fish and how much you expect to process, think about how many workers you will need for each type of position and when you will need them. Finally, use all of this information to estimate how many hours, days, or months of work you will need to pay for.



How many workers will you need?

What are the types of positions for which the plant will need workers?

What kinds of skills will each position require?

How many workers for each position will you need, both when the plant is working at full capacity and at other times?

After you have thought about how many workers you will need and the kinds of skills you will need, think about where you will find your workers. Based on what you know about the people in your village and their skills and interests, estimate how many of your workers will be from your village and how many workers you will need to bring from outside your village.



Where will you find workers?

Can you recruit workers from the village to work in the plant? How many?

How many workers will you need to bring in from outside the village? Where and how will you find them?

Where will workers who come from outside the village live? Where will they eat?

Estimating Your Labor Costs

After you have thought about how many workers you will need and where you will find them, you can begin to estimate what they will cost. Think about what wage rate you will need to pay to get good workers. You should consider what other fish plants are paying for workers, and what people are paid for other jobs in your village.

You will have other labor costs beside wages. Some of the most important are employer contributions to Social Security (including Medicaid), federal unemployment insurance contributions, and workers compensation insurance. Together these may add about 25%

over and above your direct wage costs. If you bring in workers from outside the village, you may also need to pay for their travel, housing, and food.

For getting started in your planning and your financial analysis, you may wish to use estimates of average labor cost per pound for different products, rather than estimating all the details of your labor costs. People with experience in operating fish plants can estimate what labor costs per pound are likely to be for different kinds of products in different kinds of plants.

Remember that labor costs may vary widely from plant to plant and from year to year. Labor costs depend on many factors, including what kinds of equipment you have, how efficient and skilled the workers are, what they are paid per hour, how much fish they are processing, and how much you have to pay them for “down time” when they are waiting for fish to work with or for equipment to be started up or fixed.

Over the season, and sometimes on the same day, workers may process different kinds of products. Sometimes workers do work other than processing fish, such as building or equipment maintenance. So even when your own plant starts operating, it may be difficult to figure out exactly what your processing labor costs are for each product.

This table shows one processor’s estimates of average labor costs per pound for different chum salmon products. Your own labor costs may be different.

Potential Labor Costs for Processing Chum Salmon

Product	Labor cost per pound of finished product
H & G and box (fresh)	\$0.18
Fillet-pin bone in-skin on-freeze-box	\$0.48
Fillet-pin bone out-skin on-vac-freeze-box	\$0.68
Fillet-pin bone out-skin off-vac-freeze-box	\$0.79
Fillet-smoke-pin bone in-skin on-fr.-box	\$1.24
Fillet-smoke-pin bone out-skin on-fr.-box	\$1.35
Can or jar-smoke-pin bone in-skin on	\$1.30
Ikura	\$1.00

Source: Estimates provided by the operator of an Alaska fish processing operation. Based on assumed wage of \$10-\$12/hour.



What will your labor costs be?

For each type of position:

What wage rate do you expect to pay?

What other costs, such as unemployment insurance, will you have to pay?

How many hours will you have to pay for at regular and overtime rates?

What will you need to pay for travel, housing and food for workers you bring in from outside the village?

Training

Fish processing work needs to be done carefully. Every worker needs to be trained—which costs time and money. You need to plan for how new workers will be trained and allow time for training at the beginning of the season. An important part of training is having a core group of people working at the plant who understand every part of the plant's operation and who can train new workers.

When the plant is first getting started, you may also wish to send some of your processing workers to training courses, such as those offered by the University of Alaska's Marine Advisory Program or Indian Valley Meats.

Marine Advisory Program specialists offer training in many different technical aspects of operating fish processing plants. For more information, call the Marine Advisory Program office in Anchorage at 907-274-9691, or send an e-mail message to map@sfos.uaf.edu.

Indian Valley Meats, a successful fish and game processing company near Anchorage, offers fish processor training courses for people from Alaska villages. To learn more about their training courses, call Doug Drum at 907-653-7511.



What kinds of training will plant workers need?

Where, when and by whom will workers be trained?

What will the training cost?



There's a lot to learn in operating a fish plant.

Here are some of the topics taught in the fish processor training courses offered by the University of Alaska Marine Advisory Program.

Seafood production	Quality assessment and control	HAACP
Plant design	Economic impacts of quality	Hazards
Plant set-up	QC systems: Deming's principles,	Prerequisite programs
Product flow	Total quality management, and ISO 9000	Hazard analysis
Traffic flow	Causes of quality loss	Control measures
Employee flow	Preservation methods	Verification
Information flow	Quality evaluation: sensory and chemical	Record keeping
Scheduling	Fish parasites: roundworms, tapeworms and protozoans	HACCP regulations Critical control points
Fish handling	Shelf life extension methods: chemical,	Critical limits
Heading	heat treatments, enzymes, bacteria, & chemical	Monitoring
Gutting	Ozone research	Corrective Actions
Filleting	Chlorine dioxide research	GMPs
Pinbone removal	Packaging technology: MAP and CAP	Establishing an SSOP
	Packaging technology: vacuum, films, labeling	FDA Hazards Guide Seafood Hazards
Secondary processing		Where to go for Help
Brining		
Dry salting	Better process control	HAACP plans: fresh/frozen finfish
Mincing	Botulism	HAACP plans: Cooked RTE crustaceans
Extruding	Microbiology	HAACP plans: Smoked fish
Pickling	Food container handling	Sanitation monitoring
	Principles of thermal processing	
Canning	Process room instrumentation	Food plant sanitation
Closing	Process room equipment and operation	Safety of water
Seam inspection	Still retorts: pressure processing in steam & water	Food contact surfaces
Retorting	Acidified foods	Cross contamination
	Records for product protection	Hand washing facilities
Packaging and shipping	Food plant sanitation	Adulteration
Vacuum packaging	Closures: metal & glass containers	Toxic compounds
Shipping	Retesting	Employee health
	Measuring pH	Pest control
Fish smoking	Water activity and chlorine	SSOP plans and records
History	Can seams	
Plant layout		Regulatory requirements
Equipment	Low temperature storage	FDA, EPA, DEC
Salt and salting	Terminology	Inspections
Additives	Refrigeration cycle	
Drying	Refrigeration components	Business management
Hot smoking process	Chill storage	Business plans
Cold smoking process	Partial freezing	Plant records
Product cooling	Freezing	
Smoke	Temperature measurement	Seafood marketing
Post producing handling	Ice machines	Quality considerations
Packaging	Storage in ice, CSW & RSW	Permits, licenses and reports
Shelf life	Frozen seafood storage	Bonds
Quality tests	Frozen seafood thawing	Taxes



There's a lot to learn in operating a fish plant.

Here are some of the topics taught in the fish processor training courses offered by Indian Valley Meats:

Heading	Knife sharpening
Hand filleting	Filleting machine use and maintenance
Steaking	Skinning machine use and maintenance
Salting fillets	Sizing machine use and maintenance
Freshening salted fillets	Pin bone machine use and maintenance
Brining	Tumbler use and maintenance
Pickling and wine sauces	Tumbler seasonings
Seasoning and cures	Vessel sanitation
Making salmon jerky	Water supply chlorinating and testing
Smoke producers	Ultraviolet water purifiers
Kippering (hot smoking) regulations	Sanitation (hand, foaming with air, steam cleaning, sanitizers)
Lox (cold smoking) regulations	
Strip (cold smoke) regulations and certifications	Boiler-maintenance, setup, and demonstration
Tote icing	Can teardown
Tote rotation and marking	Retort operation and record keeping
Glazing	Product receiving procedures
Sharp freezing	Calculating recovery rates
Boxing for shipping	Safeguards on equipment
Vacuum packing	First aid



Village fish processors training at Indian Valley Meats. The people in this training session were from Quinhagak, Anvik, Marshall and Ouzinkie. Doug Drum, the owner of Indian Valley Meats, is in the center of the top left picture.

