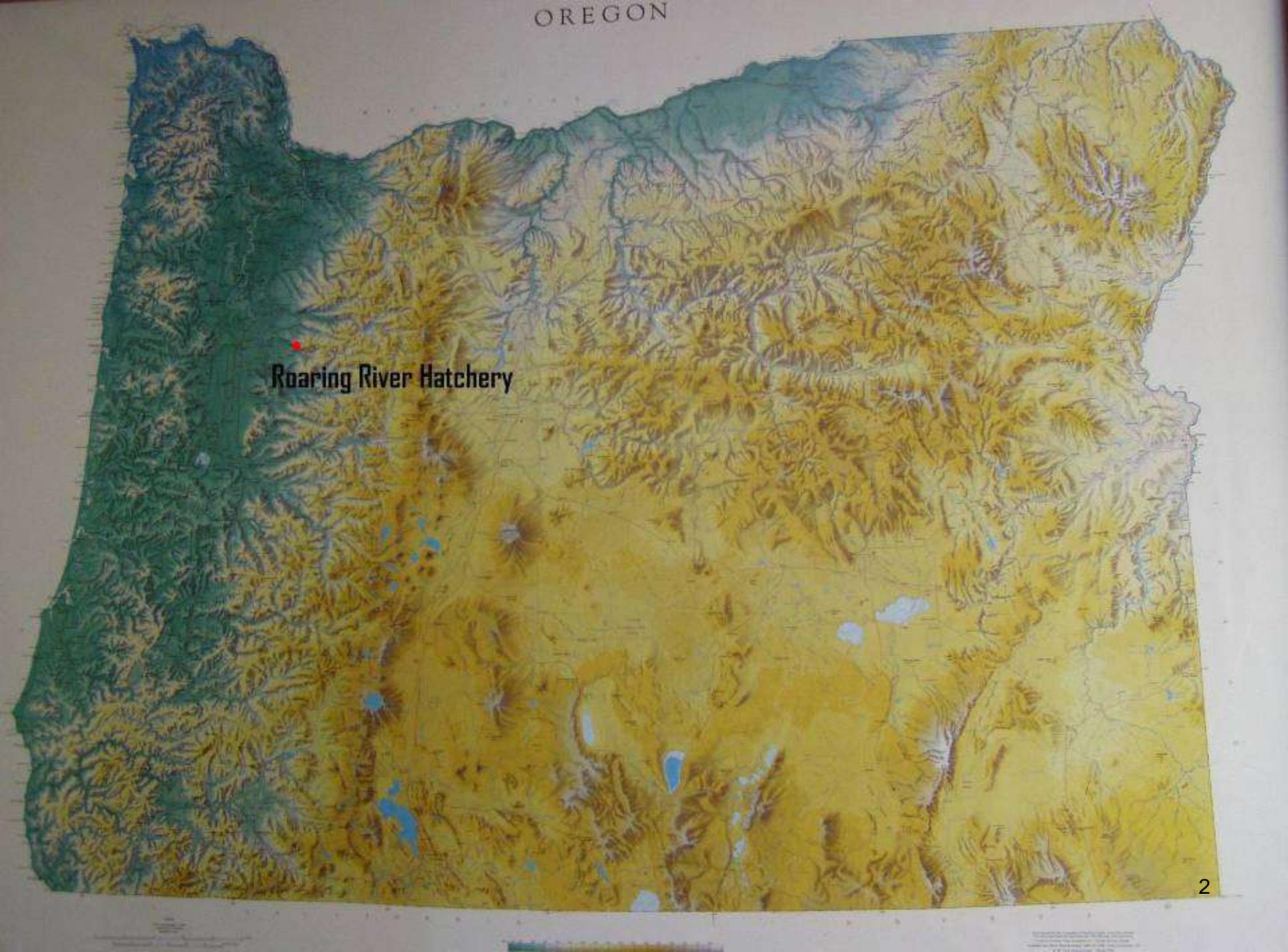


# Roaring River Hatchery Triploid Trout Program

## The Triploid Process from Egg Take to Egg Shipments

By Luke Allen<sup>1</sup>

**Roaring River Hatchery**



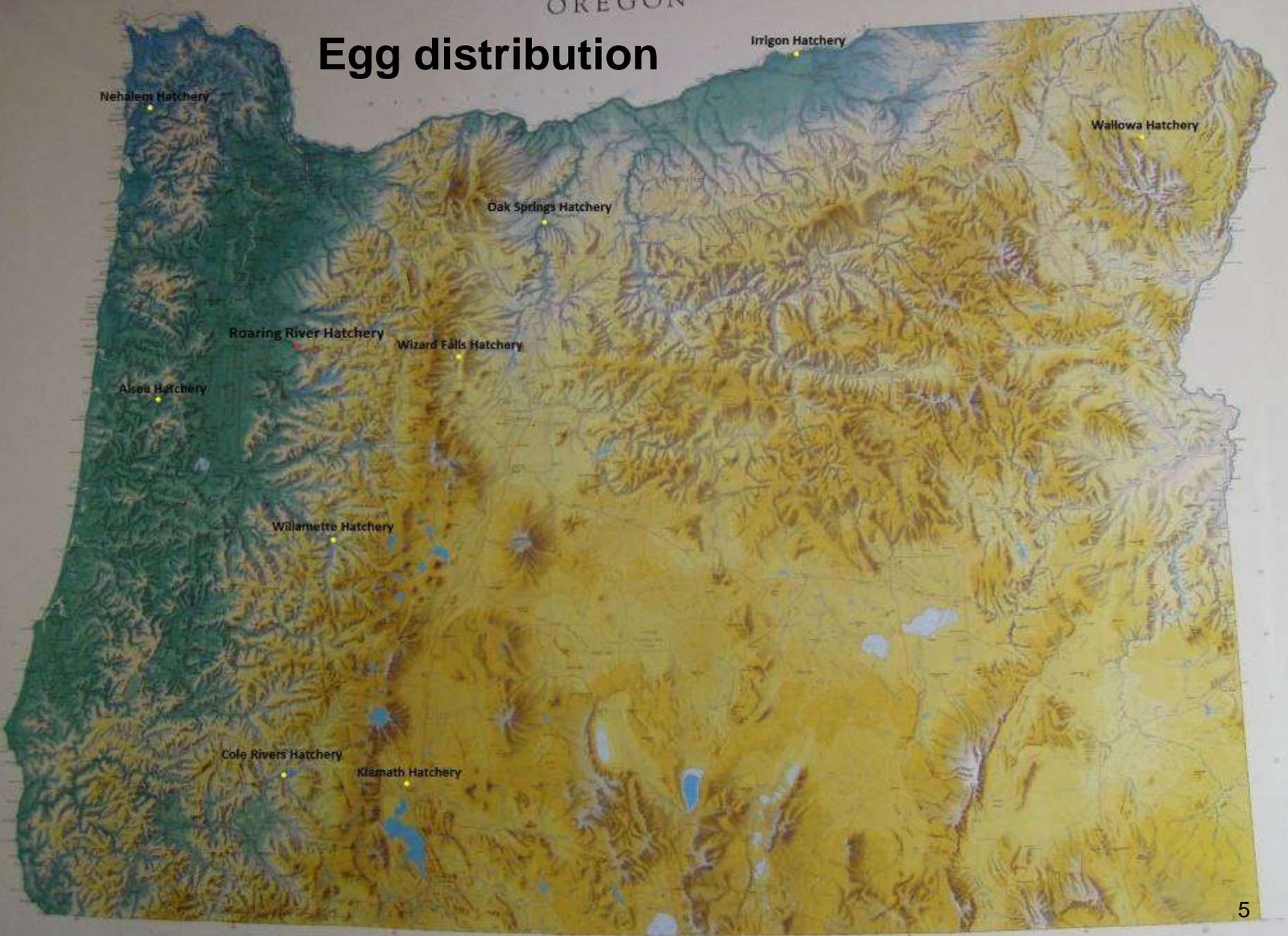
# Overview of Hatchery

- Release about 215,000 legal triploid Rb trout each year.
- Rear 151,000 Sts and 85,000 Stw from fingerlings to smolt.
- Roaring River staff consist of 4 permanents and 2 seasonal positions.
- Gravity fed from Roaring River.
- Use the 72 (Cape Cod) stock for brood program.

# Overview of Hatchery

- Start spawning the 1<sup>st</sup> of November
- Spawn 3 and 4 year old brood.
- Roaring River produces eggs that will provide for 70% of the stocked trout in Oregon.
- Roaring River will take 8-10 million green eggs/year.
- Roaring River ships 4-5 million eggs/year.

# Egg distribution



# Sorting brood



- Anesthetize brood and check for ripeness throwing ripe females in ally way to be crowded into spawn building.
- Green females are thrown over the crowder back into the pond.
- Once we are done sorting we will figure out how many males we need to crowd up for spawning.
- Will spawn the following day.

# 3 year old female

- They average between 6-8 pounds.
- 5,000 eggs/female



# 4 year old female

- Average weight is about 16 pounds. With some females being over 20 pounds.
- 10,000 eggs/female



Spawning Building



# Netting fish out of pens and putting into anesthetic



- There are four pens inside the spawn building.
- Keep 3's, 4's, and males separate in pens.

# Collecting milt

- Dip males in water to rinse anesthetic off then dry with towel before collecting milt.



# Collecting milt



- 1 male/container

# Milt

- Place containers of milt in cooler to stay cool and dry while waiting to be used.



# Air spawning



- **Spawn into container and then combine eggs in bucket until reach 50 ounces of eggs.**

# Buckets of eggs waiting to be fertilized and triploided

- Bring buckets of eggs up from spawn building to hatch house where they are placed in troughs prior to being triploided.
- Turn water on in troughs to help keep eggs cool while waiting.
- Have enough buckets of eggs and sperm stocked piled so once start triploiding there won't be any breaks.



# Eggs being fertilized

- Use 3 males/bucket and gently stir to mix. Then add enough water to activate the sperm and to cover eggs. Let sit for 1 minute to fertilize.



# Rinsing eggs



# Pouring eggs into cylinder basket

- Start TTU time.
- Triploid between 320-375 TTU's.
- Use pathogen free well water throughout the triploiding process.



# TTU trough



- Able to run two pressure vessels in tandem while triploiding.

# Pressure vessel



# Placing eggs into pressure chamber



- Once eggs have at least 320 ttu's they are then placed into the chamber.
- The pressure is then brought up to 10,000 psi for 5 minutes.

# Pouring eggs into incubators

- Eggs are placed into heath stack incubators.



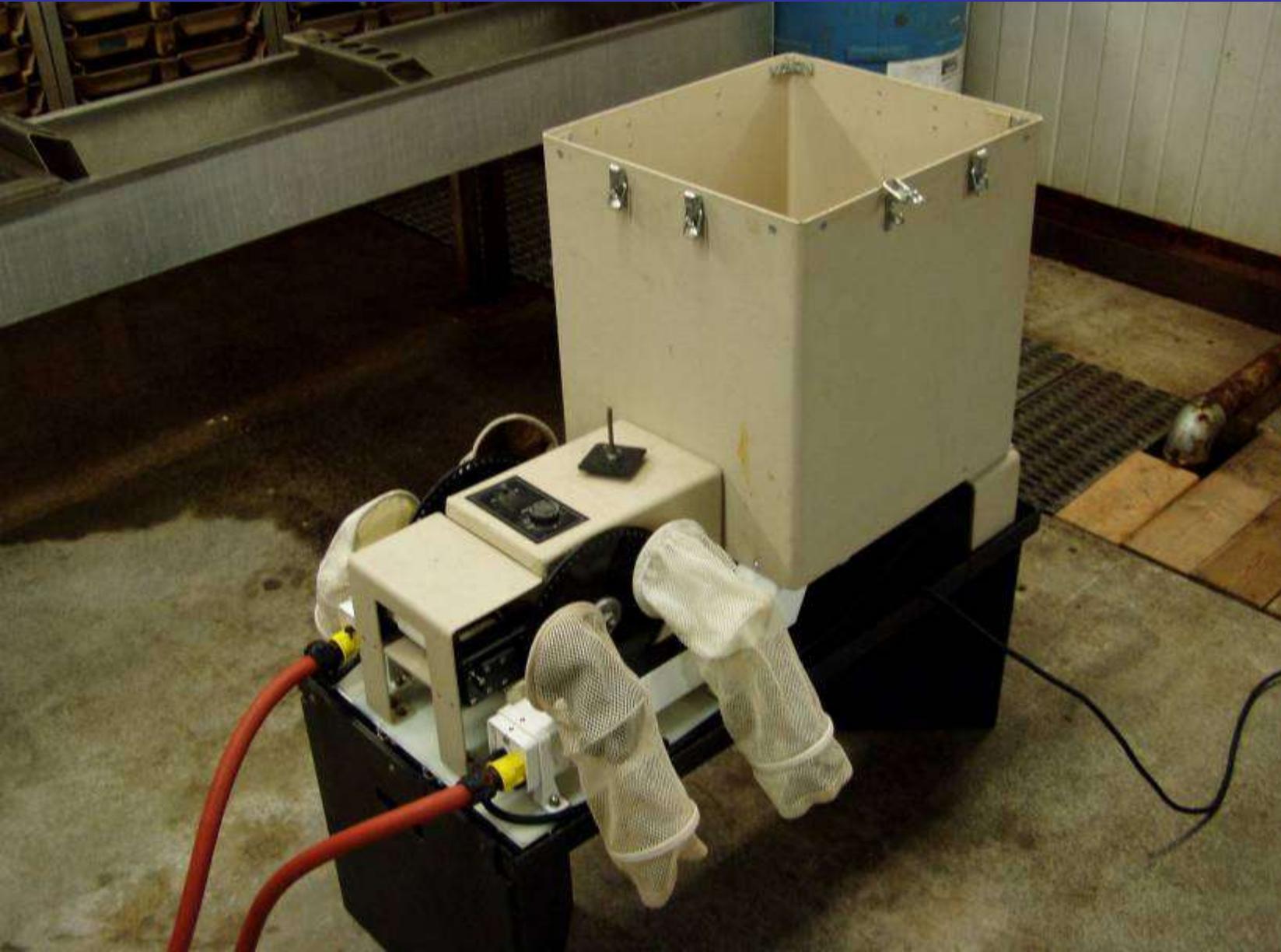


# Shocked eyed eggs

- Shock at 400 tu's
- Let sit for 24 hrs



# Egg picker



# Salting station

- 26 gallon tub
- 8.5% salt solution
- Basket is 22x16x12 inches



# Salting eggs

- Use to get the majority of the weak eyes and blanks that the egg picker misses.
- Gives the receiving hatcheries a good quality product to start off with. Low ponding mortality.



# Salting eggs

- The deep basket lets the eggs get good separation from good eggs to bad eggs.
- Salt when there is at least 425 tu's.
- Will sacrifice some good eggs to get weak eyed and blanks. Really makes hand picking a lot easier.



# Picking eggs



- Hand pick remaining bad eggs.
- Once eggs are hand picked they are inventoried.

# Shipping crate





**Questions?**