















## 2011 Larval Rearing Survey Results

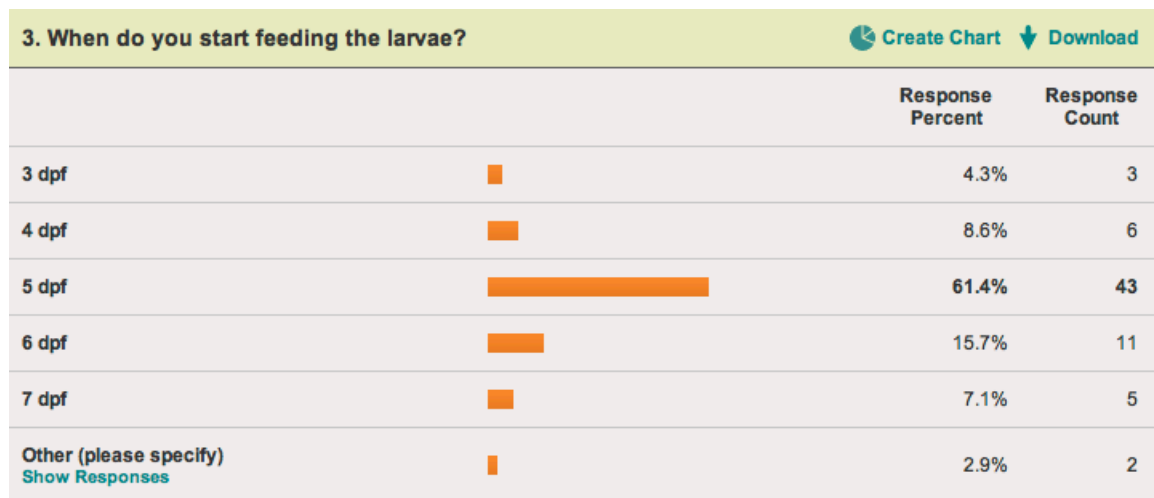
1. What is the average density of fish in a nursery tank (per Liter)?			 Create Chart	 Download
			Response Percent	Response Count
1-30			52.9%	37
31-60			22.9%	16
61-90			7.1%	5
91-120			11.4%	8
> 120			5.7%	4

2. What embryo media does your lab use?			 Create Chart	 Download
			Response Percent	Response Count
System Water			31.4%	22
Fish Water (Not from system)			11.4%	8
RO			1.4%	1
E3			27.1%	19
Other (please specify) <a href="#">Show Responses</a>			28.6%	20

### OTHER RESPONSES:

- Blue water.
- E2 [http://zebrafish.org/zirc/documents/protocols/pdf/Fish\\_Nursery/E2\\_solution.pdf](http://zebrafish.org/zirc/documents/protocols/pdf/Fish_Nursery/E2_solution.pdf)
- Fish water with methylene blue
- System Water and Methyl Blue Solution
- Egg Water: 20L RO water, 6g sea salt, 1.5g calcium sulfate, 0.75g sodium bicarbonate, and 14-16 drops of concentrated aqueous methylene blue solution
- E2
- Embryo water is .03% sea salt mix in RO water. Larval rearing water is 2ppt sea salt mix.
- Fish water for first 8 days then system water
- EM (15mM NaCl, 0.5mM KCl, 1mM CaCl<sub>2</sub>\*2H<sub>2</sub>O, 0.15mM KH<sub>2</sub>PO<sub>4</sub>, 0.05mM Na<sub>2</sub>HPO<sub>4</sub>, 1mM MgSO<sub>4</sub>\*7H<sub>2</sub>O) very similar to Hanks
- System water with methylene blue

- ERM from the Zebrafish Book
- Blue water - RO water plus instant ocean and methylene Blue
- De-chlorinated municipal water (flow through)
- I use E3, or more recently E2 since it doesn't need to de-bubbled and pH seems more stable.
- System water with methylene blue
- E3 at 1/2 strength
- Filtered Freshwater on the flow-thru system. Filtered 3ppt salinity water in static grow out chambers.
- Methylene blue-10ml (stock), 1.2 g IO sea salt 20 lit RO
- Methylene Blue Water
- E2






**OTHER RESPONSES:**

- 4-6dpf, depending on the maturity of the fish. If greater than ~80% are swimming in the water column, they are fed.
- 4-7 dpf depending on the project/screen

#### 4. Do you change densities in your larval tank within the first 30 days?

[Create Chart](#) [Download](#)








		Response Percent	Response Count
No		67.1%	47
Yes		11.4%	8
If yes please specify <a href="#">Show Responses</a>		21.4%	15

#### OTHER RESPONSES:

- Split to 30fry per 2liter tank
- Split 40 into 20 per tank
- Separate the larger fry from the smaller
- Move into bigger container
- At about 30dpf we go to 25-30 fish/liter
- 90 embryos/100mm petri-dish up to 5dpf. From 5dpf-14dpf, 20 embryos/250ml beaker. Day 14, transfer one beaker to one 3.4L tank.
- I combine larvae after 14 dpf to increase density.
- 10/l
- Decrease to 30/l or less
- Transfer of 50 Larvae from 1 Liter container to 2x4 Liter container; each 4 liter container has 25 fish
- Increase volume of water to 3 L
- Density is decreased over time to keep larvae of similar size in each tank
- Larvae are raised in Aquatic Habitat's nursery cylinders until they are eating artemia, then put into a regular tank with baby baffle
- Based on size, survival, etc., performed strictly by lab personnel.
- Fish go on the recirculating system at 15dpf at

5. What is the average larval survival rate for wild-type fish in your facility at 30 dpf?

[Create Chart](#) [Download](#)






		Response Percent	Response Count
> 50%		5.7%	4
51-60%		5.7%	4
61-70%		2.9%	2
71-80%		21.4%	15
81-90%		30.0%	21
90-100%		21.4%	15
Never measured or Other (please specify) <a href="#">Show Responses</a>		12.9%	9

OTHER RESPONSES:

- Never measured, but I would guess > 80%
- I think it is around 70% but not sure at all
- I think around 60-70% but I have never officially measured.
- Survival rate is high, but I actually do not know. Depends mostly of variability of flowing system
- I would guess about 60-70%, but have never measured
- First time we count is at 30dpf
- Only measured for core sentinel fish; 90-100%
- Probably averages 51-60% but can be highly variable -- from 5% to 95% -- we haven't yet been able to determine factors that account for this wide variability
- Variable

6. What is your first feed for larval fish?

[Create Chart](#) [Download](#)

		Response Percent	Response Count
Processed powder		38.6%	27
Paramecium		27.1%	19
Rotifers		11.4%	8
Artemia		1.4%	1
Other (please specify) <a href="#">Show Responses</a>		21.4%	15

OTHER RESPONSES:

-POWDER AND PARAMECIUM

- Rotifers, Artemia from 10dpf and golden pearls
- To begin with the larval fish are fed a processed powder, and at 25dpf I begin to feed with live artemia.
- Paramecium only day 5 to 8; day 9 to 14 paramecium, artemia and processed powder
- 50:50 hatch fry encapsulon: ground spirulina
- Powder, then Artemia and powder after 2 weeks
- Powder and artemia
- Spirulina
- Not telling.... 8-) it's a secret
- Both artemia and processed powder
- Powered Flake Food and Artemia
- Some labs paramecia, most labs powdered, all fish decapsulated Artemia post 2 weeks
- 2 paramecium +1 powdered flake
- Processed powder (3x daily) and paramecium (1ml 1xdaily)
- Vinegar eels enriched with a powder supplement

