

Everything You Wanted To Know About Guppies But Were Afraid To Ask (A Novice's Guide To Breeding And Raising Guppies)

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Topics are in no particular order for presentation (**Article under construction**)

I SETUP

10 gallon tank seems to be the standard size tank for raising guppies, but have you ever asked yourself why ? Try 20 and 30 gallon long tanks. I hate 5 ½ gallon tanks for babies, nice for setting up your breeders , but that is it. Having babies in a 5 ½ gallon tank never seemed to work for me as the babies get stunted in growth if I keep them in the tank for about a month. Perhaps it is the amount of food I feed and this is not complimented by the the necessary corresponding water changes that should be made with the amount of food that was fed.

- 1 Tanks: 20 long for males. 30 long for females, 10 gallon for babies. I have changed my thoughts on using tanks smaller than 10 gallon because of the lack of volume of water building up wastes faster.
- 2 Airline System... understanding air pressure concepts, etc
- 3 Filters: Don't like using sponge filters because they clog up too fast and stop doing their intended job.
- 4 Recommendations

II FOODS

How much food to feed depends on how much waste your aquarium can handle (support). So if you are feeding a ton of food to your guppies then you need to do a ton of water changes on your tanks. So there lies the relationship between feeding and water changes for a healthy tank. How to determine if a fish food is "OK". Look at the first three ingredients ...

- 1 Live (Micro Worms, BBS, Blackworms)
- 2 Dry
- 3 Frozen (bloodworms chopped up, Brine Shrimp)
- 4 Prepared Paste Foods (how to and what to use)

III Tank Environment

- 1 Temp: When to use heaters in each tank, different ages different temps
- 2 PH: Know your water qualities
- 3 Test kit:
- 4 Lighting: Use the standard lighting Cool white florescent
- 5 Tops for your tanks stop fish from jumping out or into another tank and ruining your color strain.

- ## IV Water Maintenance, Why, How, When, Percentage of water change depends on the stability of your water.
- How often to perform water changes on your tanks.
Know when additional chemicals are added to your water supply by the water company.

V Purchasing Guppies

Ask the questions, don't be afraid to ask ? How many lines of that particular color strain does he have ? What Line is he showing ? Does he cross his lines to get show fish, if so are those lines for sale ?

What is your objective when purchasing guppies. Do you want a color strain of guppies that have a good chance at ending up in the Best Of Show circle, or do you want a color strain that you just like and don't care about being in the BOS circle.

VI Raising Guppies Different ages different temp, different food at different ages.

VII Breeding Guppies Included is GUPPY BRIEFS # 9 **Chart 10**

VIII Showing Guppies Why show guppies, competitive drive, evaluate your fish against another breeders.

Aquarium Water Changes:

This is under the assumption that your fish are fed all they can eat in a two minute time frame with 4 feeding a day.

PERCENT WATER CHANGE	FREQUENCY	TANK POPULATION	FILTERS	RANK
25	Weekly			6
50	Weekly			5
25	Twice Weekly			4
75	Weekly			3
90	Weekly			2
50	Twice Weekly			1 (best)
Chart 1				

When setting up a new tank do not use all water from the tap / water supply. Use 20 percent water from an established tank. Then add water from the tap / water supply. Add your chlorine / chloramine water conditioner. Make sure the water temperature is at least 76 degrees. Now put in your sponge or box filters. Use filters that have been in an established tank. Now you have a tank that can accept your new fish immediately. So what if you don't have an established tank. You have to basically let your tank cycle out, meaning....) Quick Start is a quick way to allow instant addition of fish. Contains live, nitrifying bacteria which allows immediate start for aquarium cycle. Contains Nitrifying bacteria. Converts toxic ammonia into nitrites then nitrates. Reduces toxic ammonia and nitrites.



I just want to mention that my aquarium water in New York City was 7.0 out of the tap. In three days the PH was down to 6.5 to 6.3. I used bare bottom ten gallon tanks and the tanks had an average of 15 guppies, so the tanks were not crowded with guppies. There is hardly any buffering capacity in NYC water.... The water is great for South American tropical but not for guppies.

Ideal PH for guppies is 7.5 and buffering that can maintain this level. While living in NYC to maintain the PH at a 7.0 level, I employed dolomite, crushed coral etc in a nylon sack and I placed that sack in my box filters above the filter floss. It is a lot easier to place the substance in the sack as opposed to placing this media right in the filter box (too messing when cleaning the box filter). I thought that I would have problems with my water when I moved to upstate New York. The water out of the tap is 8.6 and stays that way no matter what I do to the water. I have tested the water by taking 2 pounds of dirt and put it in a five gallon fish tank. A month later the PH of the water was 8.5 . I did the same thing with only leaves from a tree , a month later the PH was 8.4 .

The biggest problem that I have with the water in my tanks is the hard water lines that are created in my tanks. I never thought that raising guppies in a PH of 8.5 + was possible must less showing them at shows across the country. The fear of showing guppies at shows because their show water was not going to be the same PH of 8.6 ... But it did not seem to be a problem....

I Just wanted to share a thought on the problem of PH and buffering. The use of a test kit really comes in handy when you are testing your water qualities in your tanks.

API Freshwater Master Test Kit



If you had the space this would be the Ideal setup using larger tanks instead of traditional 10 gallon tanks.

PURPOSE	GUPPIES AGE	SIZE OF TANK	LENGTH OF TIME	SEX
Set Up Breeders & Newborns	Set Up Breeders	5 1/2	(Newborns 0 – 1 month)	
Newborns	Newborns	10 GALLON	1 - 2 months **	
Grow Out		20 GALLON LONG	2 months +	MALES
Grow Out (If for Showing)		20 GALLON LONG	2 months +	FEMALES
For Show Males		30 GALLON LONG	3 months +	MALES
For Show Females		30 GALLON LONG	2 months – 5 months	FEMALES
For Show Females		40 BREEDERS	5 months	FEMALES
Returning Show Entries		20 GALLON LONG	Your discretion **	MALES
Returning Show Entries		20 GALLON LONG	Your discretion **	FEMALES
Chart 2				

** For those breeders that sex their guppies at one month or those that do not keep virgin females.

** For those guppies that come back from the guppy shows. An added precaution to quarantine your guppies.

Just for the record , I use both methods for selecting female breeders. In some tanks I keep my females in the tanks with the males, then when I see a nice male I take the male out along with 4 nice females and set them up in a tank. I have to wait for 3 months before I take any of the young (I am not in a rush to get results ,so I do it this way and it saves tank space for housing virgin females). The main reason I leave the females in with the males , as years ago I lost what I thought would be a very good strain of guppies. The females were left a bit too long in the breeder baskets and when I went to use the females ... NO BABIBES after several months .. and they were not Half Black Bodied females. The other way is to use a breeder basket in the tank (this basket will house 4 or 5 virgin female guppies). When selecting females Rule #1 use a light in the dark to select your females for the right color.

In your regular aquarium room lighting some females may appear to be the right color that you are looking for but when examined in the dark using a flashlight you may see the true color. Once you have picked the females with the desired color then you can proceed with selecting females with short stocky peduncles (body length after the stomach and ends just before the tail) and good body shape.

Added note: Always introduce your breeding male(s) to the breeding tank first. I once introduce a male to a tank of five females and they chased and tormented him. I had to take him out of the tank before they killed him.

Temperature differentials For Raising Guppies

AGE OF GUPPIES	TEMPERATURE	PURPOSE	
0 -- 2 Months	80 degrees	Growth	
2 -- 6 Months	76 -- 79 degrees	Slower Growth Rate	
6 -- 9 Months	75 -- 76 degrees	Show Fish	
9 or more Months	72 -- 74 degrees	Preserving show Fish Life Span	Males
8 or more Months	75 -- 76 degrees	Slow Growth show Fish	Females
Chart 3			

Judging The Quality Of Fish Food

The first THREE ingredients are the important ones, they must certainly not be fillers(wheat,oats,flour,etc). The nice thing about ingredients lists is that they're listed in descending order by weight, so the first ingredient is the dominant one. This makes finding a tomato soup that's actually made out of tomatoes as simple as making sure the first ingredient listed is tomatoes. (Lifehacker.com).

You want fish food that is low in fillers. **The first THREE ingredients are the important ones.**

Use this as your baseline this is an excellent food.

Loaded with natural color enhancers, such as salmon skins, Omega One's new Super Color Flakes offer the hobbyist an extreme, yet healthy color enhancement opportunity for their fish. Nothing on the market brings out the natural colors of fish in such a brilliant fashion. Combined with the already recognized, superior nutrition of Omega One, our color flakes represent a real breakthrough in the aquatic hobby.

INGREDIENTS: Whole Salmon, Halibut, Seafood Mix (Including Krill, Rockfish, & Shrimp), Wheat Flour, Wheat Gluten, Fresh Kelp, Astaxanthin, Lecithin, L-Ascorbyl-2-Phosphate (Source of Vitamin C), Natural and Artificial Colors, Vitamin A Acetate, Vitamin D3 Supplement, Vitamin E Supplement, Vitamin B12 Supplement, Riboflavin, Niacin, Pantothenic Acid, Folic Acid, Biotin, Inositol, Tocopherol (Preservative), Ethoxyquin (Preservative).

Guaranteed Analysis

Min. Crude Protein....42%

Min. Crude Fat.....11%

Max. Crude Fiber.....2%

Max. Moisture..... 8.5%

Max. Ash.....8%

Min. Phosphorus.....(.5%)

Min. Omega 3 2%

Min. Omega 6.....1%

Some of the best foods For Raising Guppies

Name Of Fish Food	Protein %	Ingredients		Supplier	Ranking
Dry					
Spirulina ,Plankton , Krill	41	salmon meal, dried yeast, dried plankton/krill/spirulina mix, soy, wheat, oat flours, wheat gluten & soy concentrate, dried kelp, fish oil. Lecithin. Vitamin mineral supplement, ascorbic acid (source of vitamin c).natural and some artificial coloring. Dried bacillus subtilis fermentation product, dried bacillus icheniformis fermentation	Kens Fish -- Crude protein 41.0% min., crude fat 4.0% min., crude fiber 7.0% max., moisture 8.0% max., ash 10.0% max. all natural ingredients except for some artificial coloring.no preservatives	Kens Fish	2
Omega Three Color Flakes	42	Whole Salmon, Halibut, Seafood Mix (Including Krill, Rockfish, & Shrimp), Wheat Flour, Wheat Gluten, Fresh Kelp, Astaxanthin, Lecithin, L-Ascorbyl-2-Phosphate (Source of Vitamin C), Natural and Artificial Colors, Vitamin A Acetate, Vitamin D3 Supplement, Vitamin E Supplement, Vitamin B12 Supplement, Riboflavin, Niacin, Pantothenic Acid, Folic Acid, Biotin, Inositol, Tocopherol (Preservative), Ethoxyquin (Preservative)	Omega -- Min. Crude Protein....42% Min. Crude Fat.....11% Max. Crude Fiber.....2% Max. Moisture..... 8.5% Max. Ash.....8% Min. Phosphorus.....(.5%) Min. Omega 3 2% Min. Omega 6.....1%	Omega	1
Growth Crumbles (00)	55	fish meal, fish oil, wheat gluten, wheat flour, krill meal, whey powder, lecithin, gelatin, A vitamin/mineral premix containing: vitamin A acetate, vitamin D3 supplement. Ascorbyl	Kens Fish -- Crude protein 55.0% min., Crude fat 18.0%min. , crude fiber 2.0% max., moisture 10.0% max.	Kens Fish	3

		polyphosphate (C), vitamin E supplement, inositol, zinc sulphate, nicotinic acid, calcium pantothenate, manganese sulphate, riboflavin, pyridoxine hydrochloride (B6), thiamine mononitrate, menadione sodium bisulfite complex (vitamin K) copper sulfate, folic acid, calcium iodate, D-Biotin, sodium selenite and vitamin B12 supplement, brewer's yeast, vitamin E supplement, astaxanthin, betaine, and ethoxyquin (antioxidant)			
Premium Spirulina Flake	45	Salmon Meal, Soy Flour, Wheat Flour,	Spirulina is rich in raw protein and has several important vitamins B1,B2,B6,B12,C,E,A1	Kens Fish	4
Premium Spirulina Max Flake	45	salmon meal, dried spirulina algae, soy flour, wheat flour, oat flour, corn gluten meal, shrimp meal, dried plankton, brewers dried yeast, soy oil, lecithin, vitamin supplements a, d3, b12, biotin, ascorbic acid (source of vitamin c).	Kens Fish -- Crude protein 45.0% min., Crude fat 9.0% min., crude fiber 1.6% max., moisture 9.0% max. All natural ingredients, no artificial coloring. No preservatives.	Kens Fish	3
Super Brine Shrimp Flake	50	fish meal, shrimp meal, soy flour,	Growth	Kens Fish	4
Premium Earthworm Flake	45	Salmon Meal, Soy Flour, Fresh Earthworms, Wheat, Oat & Gluten Flours, Frozen Or Dried Brine-Shrimp, Dried Spirulina, Lecithin. Fish Oil, Vitamin B1, A & C. Choline Hcl, Biotin, Methionine. Thiamine (Source Of Vitamin B1), Ascorbic Acid (Source Of Vitamin C). Dried Bacillus Subtilis Fermentation	Kens Fish -- Crude Protein 42.0% Min., Crude Fat 4.1% Min., Crude Fiber 4.2% Max., Moisture 8.2% Max. All Natural Ingredients, Except For Some Artificial Coloring. No Preservatives		3

		Product, Dried Bacillus Licheniformis Fermentation			
Premium Bloodworm Flake	43	salmon meal, soy flour, fresh bloodworms	Conditioner	Kens Fish	3
Premium Vegetable	35	Mixture Of Plants And Vegetables Including: Seaweed, Spirulina, Carrots, Squash, Spinach. Vegetable Oils	Low in protein but needed for a balanced diet	Kens Fish	5
Premium Guppy Flake	42	salmon meal, menhaden fish meal, torula yeast, hi gluten flour		Kens Fish	7
Specialty Foods					
Golden Pearls					2
Decapsulated Brine Shrimp Eggs			Soak in water for 1 hour before feeding.		1
Frozen Foods					
Hakari Brine Shrimp	HIGH				1
Hakari Blood Worms	HIGH				2
Live Foods					
Brine Shrimp	HIGH +				1
Black Worms	HIGH				3
Blood Worms	HIGH				3
Garden Worms	HIGH +		Chopped the Organic garden worms.		2
Micro Worms					6
Grendel Worms					5
Daphnia					4
Paste Foods		Beef Hearts, Chicken Livers	Good delivery system for other ingredients.		
Mixed with Spirulina Powder					
Mixed with Astaxanthin Powder					
Mixed with VitaChem					
Chart 4					

MAKING PASTE FOODS FOR YOUR GUPPIES

If you are going to make paste food for your guppies you will be creating a mess. So do it when your wife is not at home. If you are going to make a paste food, make a lot of it so that you can store the excess in the freezer. What is needed here is your wife blender from the kitchen. Remember this is done when your wife is not at home. Also needed is four large pots or four large bowls (10 quarts). This process is going to make paste food using a nice round number of 10 pounds of meat substance. We can use chicken hearts or beef hearts (preferred). So if you are going to make 10 pounds ,why not 15 pounds and share with some club members. Leave all of the other ingredients the same or you can increase the ingredients proportionally.

INGREDIENT	QUANTITY	NUTRITIONAL VALUE	COMMENT
Beef Hearts or Chicken Livers	10 Pounds	Iron, Vitamin C, Calcium	
Pure Spirulina Powder	1/4 Pound	Iron, Magnesium, Vitamin C	
Astaxanthin Powder	1/8 pound	Antioxidant,Color Enhancer	
VitaChem Fresh Water	4 ounce	Vitamin C,E,B12,K and more	
Horse Dewormer: Equimax , Safe Guard ,Zimecterin, Panacur	Roughly 1 – 1.5 oz syringe tube		Add this when mixing the baby food
Gerber baby food: carrots	3 Jars	Vitamin A	Strained
Gerber baby food: Sweet Potatoes	3 jars	Vitamin A	Strained
Gerber baby food: peas	3 jars	Vitamin A, Zinc, Iron	Strained
Fresh Shrimp	1 – 1.5 pounds	Calcium, Magnesium, Iron	Also binds the mix
Chart 5			

STEP I

Here is the hardest part of the whole process, cleaning the beef heart. Trimming the beef heart/Chicken Livers of fat and all of the stringy substances. If you have a meat grinder then grind up the cleaned beef heart. If you don't have a meat grinder then cut up the beef heart into small chunks of about one inch. Now here is the tricky part. Do not burn out your wife's blender. Add 1/2 cup of the beef hearts to the blender. Add one cup of water. Now turn on blender to chop mode , then to puree, then to liquefy. When the mix is like a milk shake consistency then pour through a strainer into a large bowl. Toss the remains of the strainer in the trash. If this goes "OK" without the smell of the blender burning up, you can increase the amount of beef hearts to one cup and the amount of water to two cups of water. Follow the previous steps above.

STEP II

When all of the beef hearts have been liquefied you can now start mixing the other ingredients in the blender. But first add 2 cups of water to the blender. Now add all of the baby foods, then add the spirulina powder, then the astaxanthin powder then add the one ounce bottle of VitaChem to this mixture . Now add the horse de-wormer. Turn the blender on to the blend or liquefy mode until this too becomes the consistency of a milk shake. Add more water if necessary.

STEP III

Now we have two bowls full of the paste food mixtures. This again is the tricky part and can easily burn out your

wife's blender. Peel the shell off the fresh shrimp. You can devein the shrimp if you desire. Add a cup of water to the blender, then add five or six shrimp to the blender. Try the chopping mode first, then then blend mode then the puree mode. Do not try to make this into milk shake consistency. This will end up being a glob or paste like mixture. You will need a spatula to scrape out this mixture from the blender. Start the procedure over and over until all of the shrimp has been processed.

STEP IV

This process will have to be done in multiple stages. Take a portion of the beef heart and pour into the blender. Now take a portion of the baby food mixture and add to the blender. And finally take a portion of the fresh shrimp and add that to the blender. Turn the blender onto the stir mode then the blend mode. The fresh shrimp will act as a binding agent. This mix is put into the fourth bowl or pot.

STEP V

Pour the mixture from STEP IV into a plastic bag. Place a sheet of cardboard in between each 3 mil plastic bag or freezer bags. This will ensure that the frozen bags stay flat when they freeze. Repeat again from step IV.

Note: For the last batch add horse de-wormer to the remaining last one or two batches.

I used this basic mixture back in 2001 and it worked fine for me. One must be careful as to not overfeed your older males with this as they will become too chesty. Also do not overfeed or you will pollute your fish tanks. Pound for pound this is a cheap way to feed your guppies.

And last but not lease clean up the mess before your wife gets home. Make sure that blender is spotless and does not smell. Throw out the garbage. Tell her that you are going to take her to dinner, or maybe not, she might think that you are up to something... On another note so you do not get into trouble with your wife. Have a club function and make the mess at some other sap's house.... Only kidding... NOT

FOOD FOR THOUGHT (Just Something To Think About)

FOOD TEST NUMBER 6642 (LARR. JOHNS. ROBINS)

FOOD	TOTAL YOUNG	MALES	FEMALES
1: Earthworms, chopped	178	87	91
2: Earthworms, chopped frozen	164	81	83
3: Beef heart	143	64	79
4: Tubifex	141	61	80
5: Brine Shrimp, Hatched	101	48	53
6: Gordon's Formula (Liver)	79	39	40
7: Brine Shrimp, Adult Frozen	76	37	39
8: Dry Food, flake & regular	52	24	28
9: Freeze-dry (brine shrimp & tubifex)	40	23	17
10: Leaf lettuce	37	21	17
11: Peas	28	19	9
12: Farina	18	9	9
13: White worms	16	7	9
14: Oat Meal	12	5	7
15: Bran	9	5	4
16: Bread	6	5	1

All low producing pairs were given earthworms at the end of the above test and all quickly gave results as in # 1

17: Earthworms and dry food	194	93	101
18: Earthworms, beef heart and lettuce	221	107	113

In the testing of beef heart it was found that feeding this material, even every other day, prolonged the guppy's life from 25% to 50%.

Do not use EarthWorms from your yard or a bait shop. You don't know for sure if the soil that the earthworms were raised in is chemical free. Uncle Jims Worm Farm has organic earthworm cultures (EBAY or Amazon) from the web. Do not use Tubifex, 90 percent of the time they are "OK" , don't take the chance , you will lose... In place of Tubifex you can use California Black Worms. (can be obtained from Eastern Aquatics).

Air delivery System For Raising Guppies

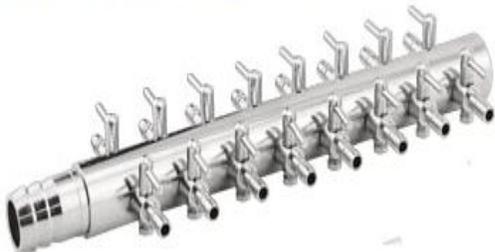
NAME OF AIR SUPPLY	SPECS.	NUMBER OF TANKS	COST US \$\$ -- 2015	RANK
Alita AL-40 Linear Air Pump	Runs on 46 watts and has an air output of 48 lpm @ 2.18 psi	40+ Ten Gallon Tanks	\$150.00	5
Alita AL-60 Linear Air Pump	Runs on 60 watts and has an air output of 68 lpm @ 2.18 psi	60+ Ten Gallon Tanks	\$185.00	2
Alita AL-80 Linear Air Pump	Runs on 85 watts and has an air output of 85 lpm @ 2.18 psi.	100 Ten Gallon Tanks	\$230.00	1
Jehmco EcoPlus Commercial Air	This unit operates on 280 watts of electricity per hour. With 200 liters per minute total output at 5.1 PSI per outlet.	125 Ten Gallon Tanks (noisy)	\$110.00	8 Used for very large setups
Jehmco Linear Piston Air Compressors	Model #LPH60 115 VAC, 72 watts @ 67 LPM @ 1.5 PSI	65+ Ten Gallon Tanks	\$250.00	3
Jehmco Linear Piston Air Compressors	Model #LPH80 115 VAC, 87 watts @ 82 LPM @ 1.5 PSI	85+ Ten Gallon Tanks	\$290.00	6
Jehmco Regenerative Blower #RBSEZ-03	Output: 11 CFM & 241 watts @ 1 PSI, 20 cfm & 188 watts @ 14" , 11 cfm & 241 watts @ 27" max water depth 30" nameplate amps: 2.6 A @ 115V	250+ Ten Gallon Tanks	\$350.00	7 Used for very large setups
Supreme AP-100 Air Pump	100 watts ,9150 cu. In/min. Pumps in depths of 11 feet of water. 33 outlet manifold included.	70+ Ten Gallon Tanks	\$165.00	4
Chart 6				

The use of PVC plumbing pipes and parts will help you in creating your airline system.

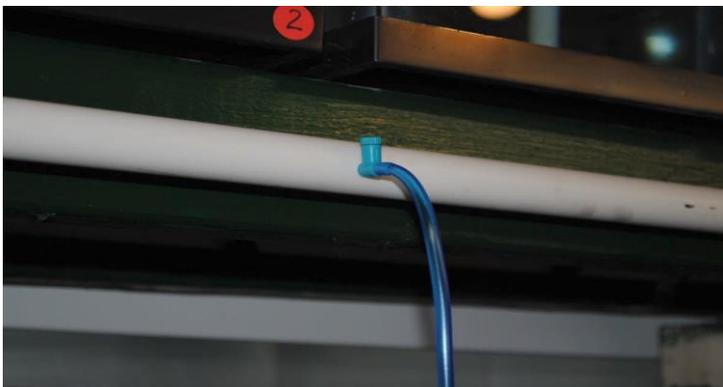
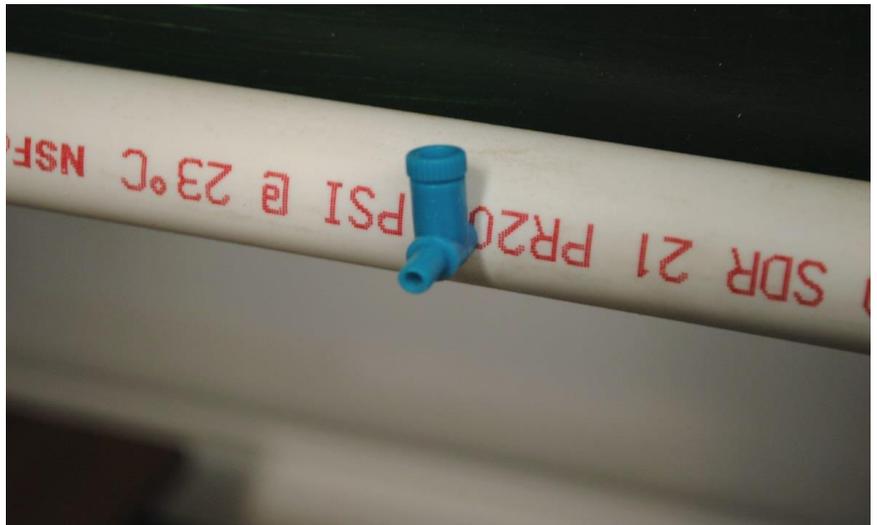
Flexible Airline Tubing



16 Outlet Distribution Manifold



Lee's 2 Way Control Valve



HARDEST COLOR STRAINS TO WORK WITH FOR BEGINNERS

COLOR STRAIN	DEGREE OF HARDNESS FOR BEGINNERS	BEST OF SHOW POTENTIAL	# OF COLOR LINES NEEDED	MOST COMPETITIVE CLASSES
RED	2	5	2	5
BLUE	2**	5	1	5
BLACK	2	2	1	3
GREEN	2**	5	1	5
MULTI	3	2	1	3
AOC	2	3	1	3
YELLOW	5 (Keeping the yellow)	1	1	2
PURPLE	2**	5	1*	4
ALBINO(RED)	3	5	2	4
ALBINO(AOC)	3	5	1	3
BRONZE	4 (Keeping the bronze etchings)	2	1	3
GOLD	3	1	1	2
HALF BLACK GREEN	3	3	2	3
HALF BLACK RED	4 (Keeping the Black out of the caudal)	5	2*	4
HALF BLACK BLUE	3	5	1*	4
HALF BLACK PASTEL	3	5	1*	4
HALF BLACK AOC	3 (matching the caudal to dorsal pattern)	5	1	5
HALF BLACK YELLOW	4 (Keeping the yellow)	5	2*	4
HALF BLACK PURPLE	3	3	2*	3
RED BICOLOR	2	2	1	3
BLUE/GREEN BICOLOR	2	2	1	3
AOC BICOLOR	2	2	1	3
SNAKESKIN SOLID	3	3	1	2
SNAKESKIN VARIEGATED	2	3	1	3
SINGLE SWORDTAIL	3 (you have to raise too many to get so few good swordtails)	1	1	3
DOUBLE SWORDTAIL	3 (you have to raise too many to get so few good swordtails)	1	1	2
VEIL-TAIL-STRAINS	2	1	1	2
	Additional lines to keep color intact			
* AOC(WHITE)	Used to lighten up the color			

* GOLD RED OR ALBINO	Used to lighten up the color			
* HB PASTEL	Used to lighten up the color			
* RED	Used to darken up the color			
** Blue/Green/Purple crosses	Used to correct the color			
GREEN	Used to improve size and shape			
Chart 7	5 being the hardest	5 being the best		5 being the most

For Spilt tails in your guppies

If you have a guppy or guppies with split tails in a tank, here is something that worked for me. Put one tablespoon of flake food in a cup and then add one teaspoon of VitaChem. Next stir this in the cup. If it is too thick then just add a little bit of water to make a loose paste (this is enough food to be feed over a period of time). Now take your guppy / guppies with the split tails and place them in say a 2.5 gallon tank. Feed this mix to your guppies. Repeat the feedings for about four to five days. You will know if this is working or has worked. After healing return the treated fish back to its tank.

Now the cause of the split tail is probably due to your miss handling or too many females in the tank nipping at the tails of the male guppies. Your fish net might be too hard (soak it in hot water , until it softens). Reduce the number of females that are in the tank with the males. If you don't have any females in the tank , then place one or two females in the tank to take the focus off the males chasing each other.

Vita Chem Fresh Water



A complete vitamin supplement with natural lipids and aminos . VitaChem has a special combination for fin regeneration and lateral line disease. VitaChem also has the highest amount of vitamin C available.

LINE BREEDING CHART

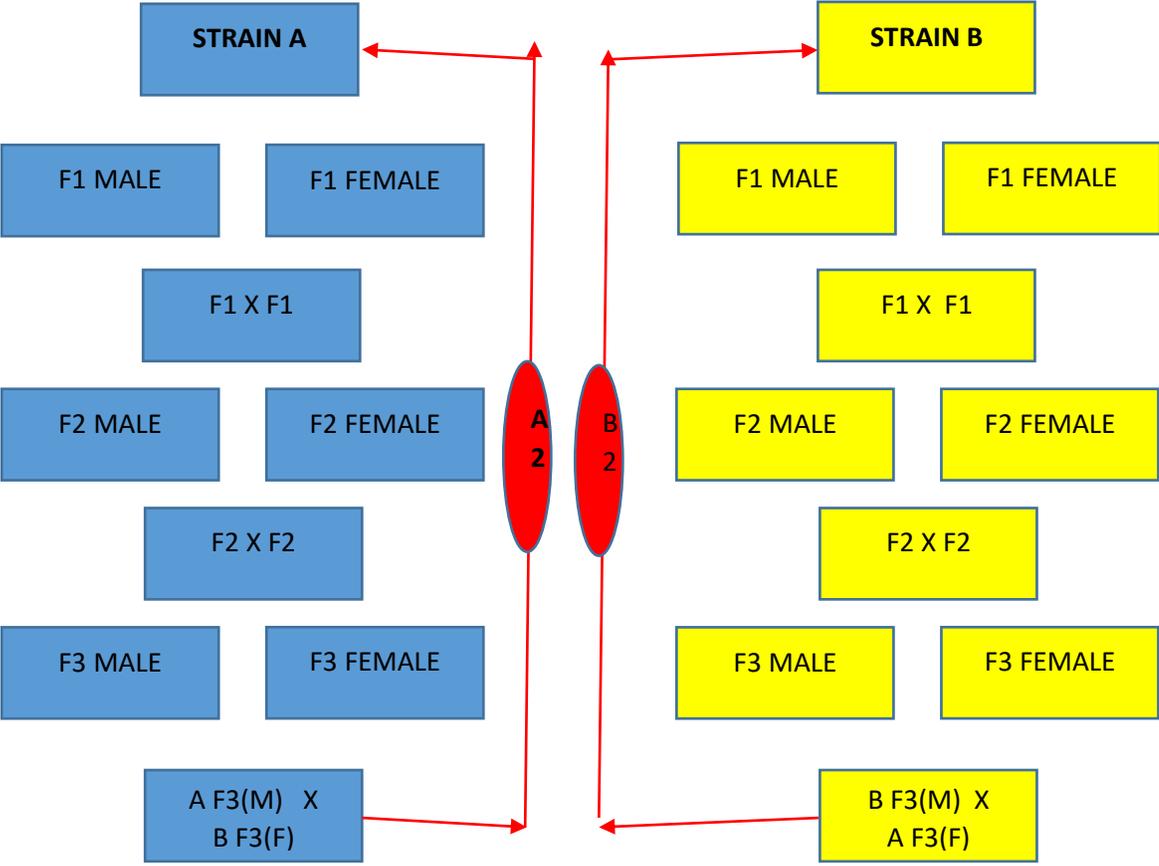


Chart 8

Breeding Guppies

With The

Minimum Number Of Tanks

So you have asked yourself and others the question, How many fish tanks do I need to maintain a guppy color strain ? The magic number here is seven, but that will also depend on the color strain that you want to breed. The reason for this is you may need an additional color strain to maintain the line that you want to breed. Take for example Reds and Gold Reds (Gold Reds used when the color of the red is too dark, muddy, or not brilliant).

In the general conversation the magic number will be seven tanks and what is called net breeder baskets by Marina or Lee. This process will incorporate a ruthless culling process. To start we will only take two drops from each female. After that we will only take a single drop from a female. **Also have a note book to track what you have done.**

ONE TRIO OF GUPPIES (One male and Two Females)

For argument sake, let's say we have the use of five ten gallon tanks and two 20 longs and 5 net breeder baskets.

Tank # 1 Ten gallon tank: The parents will go into this ten gallon tank

Tank # 2 Babies from tank # 1 : when the young can be sexed , take 4 females and place them in a net breeder basket. Discard the remaining females or place them in the twenty gallon long (tank # 7) to be disposed later.

Tank # 3 Same process as tank # 2 (month one, first drop)

Tank # 4 Same process as tank # 2 (month two, second drop)

Tank # 5 Same process as tank # 2 (month two, second drop)

Tank # 1 Break down tank # 1 , put parents in tank # 7 with all discarded females.

Tank # 6 Select all males that are show worthy and place in tank # 6 (first month males).

This tank will now require frequent water changes, due to the increased population. Take one female from tank # 2 and one female from tank # 3 from the net breeder baskets and place the females in tank # 6. By placing the females in tank # 6 with all of your possible show males the four females will keep your show males from chasing each other and they will focus on chasing the females.

Tank # 7 Cull tanks 2, 3, 4, and 5 for all unsuitable males. These culls are to be placed in tank # 7.

All the fish can be sold , brought to your local aquarium club for auction, or simply disposed of or feed to your pet Oscar. Now break down tank # 7.

Tank # 7 Select all males that are show worthy and place in tank # 7 (second month males).

This tank will now require frequent water changes, due to the increased population. Take one female from tank # 4 and one female from tank # 5 from the net breeder baskets and place the females in tank # 7. By placing the females in tank # 7 with all of your possible show males the four females will keep your show males from chasing each other and they will focus on chasing the females.

So to summarize / recap things at this point we have tank # 6 is occupied with show males and two females (first months males from tank # 2 and tank # 3). Tank # 7 is occupied with show males and two females (second months from tank # 4 and tank # 5). Tanks # 1 is empty and tanks # 2 through 5 contain 3 females each in the breeder

baskets. Because we are culling ruthlessly and have a limited amount of tanks, we may be forced to pick out our breeders a bit earlier than desired based on the color strain that we are working with, I'll explain. In some Half Black body color lines if you wait too long to breed with these virgin females you might never get a drop of young from them. Some breeders never keep virgin females, the breeders just put the desired males (two) with the females and collect young only after the third month. In this program this will not be the case as we have to set up breeders at an earlier age.

If you thought the culling process was ruthless , just wait until this next stage.

So your fish are about 5 months of age. It is time to start to pick out your breeders.

Take the best male from tank # 6 and place it in tank #1. Take the best two females from the net breeder basket from tank # 2 and place them in tank # 1. Now take the best two females from the net breeder basket from tank # 3 and place them in tank # 1. Take the remaining females from Tank # 2 and tank # 3 and place them in a net breeder basket in tank # 1. Tanks # 2 thru tanks # 5 and completely empty.

Almost a month's time has passed and the females in tank # 1 are just about to have babies. Only take one drop from any two females. The babies are to be placed in tanks # 4 and tanks # 5.

Babies from tank # 2 : When the young can be sexed , take 4 females and place them in a net breeder basket. Discard the remaining females and culled males.

Babies from tank # 3 : When the young can be sexed , take 4 females and place them in a net breeder basket. Discard the remaining females and culled males

After three months time you are still culling males from tank # 6 and tank # 7.

Give to a trio to a friend in case you lose the color line for whatever reason.

You will also be culling males from tank # 2 and tank # 3. Sell these culls or bring down to your club auction or simply dispose of or feed to your pet Oscar.

It's almost time to dispose of your breeders in tank # 1. Tank# 4 and tank # 5 are still empty at this point.

Separate the outstanding males from tank # 2 and tank # 3 and put all of them in tank # 4.

The males in tank # 4 will be your future breeders.

Take the males from tank # 6 and place them with tank # 7. You may say that you are overcrowding tank # 7.

You are probably right so tank # 7 will have to have an increase water maintenance routine. Because you are showing using tank # 6 and tank # 7 as a source of your show fish, some of these fish might not be suitable to show again. The unsuitable fish should be discarded , thereby reducing the population of tank # 7.

The remaining males from tank # 2 and tank # 3 should be placed in tank # 6 along with 2 females from tank # 2 net breeder and 2 females from tank # 3 net breeder.

So you see we are rotating and shifting tanks. Tank # 1 will always be your breeding tank. Tank # 6 and tank # 7 will always house your show fish with the exception of the first time use for culls.

All returned show fish go in Tank # 1 for quarantine purposes. After that quarantine period is over the show fish can be returned to it's 20 gallon long tank.

Remember after the first phase, culling is ruthless.

So here are the questions that you did not ask because you forgot, did not think to ask or was afraid to ask.

How do you determine what guppies food are the best ?

You have been shown how to determine the quality of a particular guppy food by reading the ingredients. Now you can make somewhat of an educated guess as to what food you want to feed your guppies or even trying a new food to try out on your guppies. In any case I have made a chart of some of the best foods that a lot of breeders are using. There are more than likely other good foods that can be fed to your guppies but you now have the knowledge to make that decision on the quality of the food. From **Chart # 4** above, these are the foods that I have used or are using. **Ask a couple of breeders: What they feed their guppies and the best food they like and why ?**

How do you know when you have fed your guppies enough food ? How often do you feed your guppies ?

The question here should be how often are you prepared to do water maintenance on your tanks. Some breeders feed 3 or 4 times a day with one of those feedings being baby brine shrimp. This is probably based on their work schedule and the ability to fit these feedings into some allotted time slot. The above breeders perhaps give additional feeding during the weekend. On the other hand some breeders may feed their guppies 5 to 8 times a day. In either case the more you feed your guppies, the more waste your guppies will produce which will translate into more water maintenance on your guppy tanks. In general when you see that the stomachs of your guppies have that slight bulged. Another indication is when they no longer make haste to the food. The rule of thumb is all the food your guppies can eat in two to three minutes. This too depends on the population of the tank. **Second Pass:** After making a complete round of feeding all of the guppies, if I see tanks where all of the food has been eaten , I feed a little bit more food to the guppies that are in that tank.

Ask the breeder: Would he feed more if the water in the aquarium required less maintenance ?

How often should I change the water in my guppy tanks ?

Changing water in your tank should be a weekly routine. If you can change the water using the water straight from the tap or from your well (with minimal water treatment) you are one of the lucky ones. If indeed you are one of the lucky one your water supply is unlimited and you can do larger water changes on your tanks. If you are not one of the lucky ones, then you have to store the water before you can use it , thereby limiting you to the amount of water that you can change. The larger the water change the better, providing that your fish can tolerate such a large water change.

From **Chart # 1** you can see that several smaller water changes are better than one large water change during the week.

Ask the breeder: Do you religiously change a certain amount of water each week ?

How do I make the decision of buying guppies from a particular guppy breeder ?

Even if you purchase guppies from a well known established breeder you still have to ask many questions. The reason I say to ask the breeder many questions is that guppies that are being shown by that breeder for that color may not be the color line that you might be buying. The breeder might have several lines of that color. You always have to ask questions.

The easy way is to buy guppies off of AQUABID, but that is the easiest way to have a bad experience with your purchase. The best way to purchase guppies is to actually be there to purchase your guppies. Like I said a long time ago , “Be An Educated Consumer”.

A lot of hobbyists are happy that the breeder has agreed to sell you your desired guppies, but you fail to ask the breeder important questions about the line of fish you have just purchased. The Breeder has worked the line for some time now and has decent guppies. That is why you are buying them. There is a lot of information that he can pass onto you. But if you don't ask questions, you won't know. By asking the proper question you can in fact save yourself a lot of time and grief. The last question should be but not in an offensive way.

Ask the breeder: Are you selling me the line that you are presently showing ? And what to look out for in the line ? or still better : I want to buy the line that you showed at the last show and what should I look out for in the line ? or some question of this nature.

How many tanks do I need to keep one color line of guppies ?

The amount of tanks for a particular color strain can vary based on that color strain. The general answer to this question is twenty tanks. I say twenty tanks because you may want to create multiple line of that color strain. Linebreeding techniques can be seen in **Chart # 9**. As little as seven tanks can be used but that will take some doing and creativity in the usage of the tanks.

Ask the breeder: On Average how many tanks are you actually using for any particular color line of guppies and when do you deviate from that ? Do you put mixed colors males together in the same tank ? Do you put different drops of young into the same tank ?

When do you pick out your breeding stock ?

As mentioned when you pick out your guppies for breeding, that will depend on two things the number of tanks you have available or the characteristics of you color line. Some Half black bodied lines have to be bred at an earlier age because they become infertile at a much earlier age, so some breeder will set up breeders earlier, use an older male to younger females or just not keep virgin females and set up breeders using pre hit females then only collect the you after the third drop (as females can have multiple drops of young even when no males is present) .

When do you pick out your breeders for this color line and what do you look for in this line ?

What females to use or what males to use ?

What guppies not to use in this color line for breeders ?

What females or males to toss ?

Are there any other lines of guppies that you use to maintain this line ?

Do you ever put different colors/color lines of females at the same time in with the selected breeding male ?

If interested, when should I show guppies for my first time ?

You always want to measure how good your guppies are. If you live near an All Species Aquarium Club, then chances are that they may host a show every few years. This would be a perfect chance for you to compete if you so desire. That club may even have monthly bowl shows where you can compete. Then there are guppy shows that are hopefully within a few hours drive that you can attend. You have nothing to lose. You may even meet someone else that is interested in guppies. Guppy shows are measurement of how well your guppies are, even if you enter only in one show.

Don't be afraid of showing your guppies, just because you know that the big time guppy breeder are showing their guppies. These big time guppy breeders at one time were just like you, new comers to the art of showing guppies. Besides there are special classes for new comers to show their guppies. There is even a junior class for those youngsters that want to show their guppies. The requirement for the junior class is that you must be 16 years of age or younger at the beginning of the show season which starts at the International Fancy Guppy Association Annual Show in October/November. There have been novices that have finished in the best of show at their first show. So don't be afraid to show your guppies, you never know. Just like the LOTTO, "You have to be in it to win it". In

showing your guppies you have a better chance at winning the a Best Of Show award than the Lottery. IF you are lucky enough to witness the judging of your guppies at a show , it is a great learning experience when the judges are explain to each other the qualities/faults of each of the entries in your class.

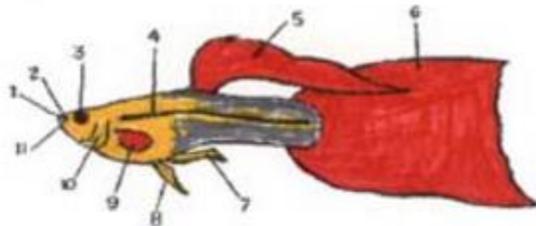
If you have shown guppies and your guppies did not do good at the show and you are present , you can ask the judges what was the problems with your entry. Perhaps you can contact the show chairman and explain that you are a junior or novice and if your fish do not do well maybe he can explain to you why in a brief note, after all you took the time to send entries to his clubs show of which he is the show chairman. His response would be good for you and good for the hobby's future.

These are all valid questions to ask the breeder , after all it is you hard spent money and you owe it to yourself to get all the information on these guppies as the breeder is willing to supply. With the advent of social media, don't be afraid to post a question about guppies, especially if you have a problem with your guppies.

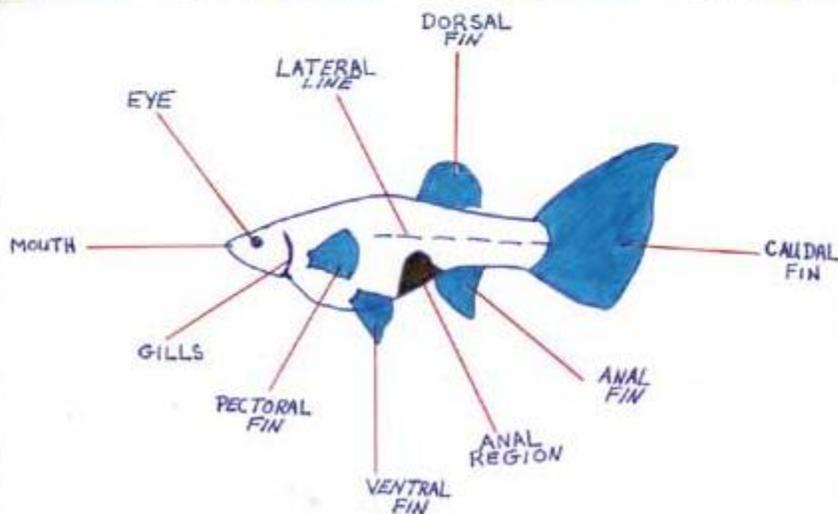
These were extracted from the **South Jersey Guppy Group web page** which I wrote back in the mid 1990's. I have since modified some of the tips here. The summary was called "**GUPPY TIPS**"

1. Use bare bottom tanks, 10 gallon tanks for guppies over 1 months of age and 5 1/2 gallon tanks for babies.
2. Use box filters in your tanks, marbles and filter floss or use sponge filters.
3. Change about 25 -50 percent of your water each week, siphoning the debris from the bottom of the tank. The water should be aged or treated with a chlorine/chloramine remover if you have these chemical in your water supply.
4. The pH of the water should be in the range of 7.0 + range (7.3 -7.5 is preferable).
5. The temperature should be between 75--80 degrees (guppies 0-4 months 78-80, 5-8 months 75-77, 9-12 months 72-74).
6. Your guppies should enjoy about 10-16 hours of light a day. An automatic timer should be used to turn your lights on and off . A half hour before you get up in the morning the lights should come on. Shortly after you have gotten up, your guppies can be feed. One to two hours later the lights can go off. About a half hour before you arrive at home the lights should come on again, the lights will stay on for 6-8 hours more.
7. Newborn guppies as well as your older ones should be fed newly hatched brine shrimp once or twice a day. A variety of flake food should be fed as well, frozen foods can be feed as well.
8. Your male guppies should be separated from the females at about 4 weeks of age. This must be done as the worst male of the lot can fertilize the females and ruin your stock.
9. Don't overcrowd your guppies, twenty guppies per ten gallons (fish that are 5-7 months).
10. Always cull your guppies, give a trio to fellow guppy breeder (back up, if you lose the line) . If indeed you have lost the line , your friend can give you back that line.
11. Join a guppy club, if there are not any guppy clubs in your area, then join an all species aquarium club and start a guppy group within that all species club. When you have 4 other members you can apply to the **International Fancy Guppy Association** (IFGA) as a new club... Hope to see you soon, good luck.

ANATOMY OF A GUPPY



(1) mouth, (2) nostril, (3) eye, (4) lateral line, (5) dorsal fin, (6) caudal fin, (7) gonopodium, (8) ventral fin, (9) pectoral fin, (10) operculum covering gills, (11) chin



The peduncle area is the area of grey that is shown in the diagram above in the male guppy.

Chart 9

**Good luck with your guppies and your new friends.
Enjoy both**

Added bonus: A Breeders Guide

A Breeders Guide

If you wanted to create a guppy color strain because you did not want someone else's line or you could not purchase that desired guppy color strain, then here are possible ways for you to create your line from two totally different color lines. Cooking From Scratch.

	DESIRED COLOR	STEP	MALE	FEMALE	LIKELY RESULTS
1	Purples		Black	Blue	With one tank of these, I had one 4 th place best of show delta, and finished 2 nd in the purple color class.
2	Bi-Colors		Most Solid Colored Caudals	SnakeSkin Variegated	
3	AOC Bi-Colors Yellows		HB-AOC Leopard	Green	
4	Big Bodied Swordtails		Delta	Swordtail	Clubbed extension swords, Good extension swords and non-swordtails also some Bi-colors and Multis
5	HB-AOC		HB-Pastel	HB-Blue	Works both ways
6	HB-AOC		HB-Blue	HB-Pastel	Works both ways
7	HB-Purple		Black	Green	Breeder # 1 says *
8	HB-AOC		Variegated SnakeSkin	HB (non Black Delta)	Breeder # 2 says **
9	HB-AOC				Breeder # 2 says 5 or 6 works **
10	HB-AOC		HB-BLUE	HB-Yellow	Breeder # 2 Says **
11	HB-AOC Variegated		YELLOW COBRA	HB-GREEN	
12	Bi-Colors		Solid Caudals	Bronze	
13	Multis		HB-Yellow (No HB gene on Male)	Bronze	Multi, Bi-Colors, others
14	Multis		Yellow	Bronze	Breeder # 3 says *** Multi, Bi-Colors
15	Multis Red Base Color	1a (Multiple Step Process)	Red	SnakeSkin Variegated	Red Bi-Color & poor Reds (F1)
		1b (F1 best Red Bi-Color)	F1 best Red Bi-Color	SnakeSkin Variegated back cross to parent or	Sure up the gene pool

				parental sister	
		1c (F2 Best overall Red Bi-Color)	(F2 Best overall Red Bi-Color)	Blue Mosaic	F3
		1d (Best Bi-Color F3)	F3 Best overall Red Bi-Color	Best Bi-Color F3 use different color/patterns caudals	F4 Should start to see some Multi colored guppies.
	NOTE	1e	Best Multi	Green	If the size of your crosses are a problem
16	Multis Blue Base Color	2a (Multiple Step Process)	Blue	SnakeSkin Variegated	Blue Bi-Colors & poor Blue (F1)
		2b (F1 Best Blue Bi-Color)	F1 Best Blue Bi-Color	SnakeSkin Variegated back cross to parent or parental sister	Sure up the gene pool
		2c (F2 Best overall Blue Bi-Color)	F2 Best overall Blue Bi-Color	Red Mosaic	F3
		2d (Best Bi-Color F3)	Best Bi-Color F3	Best Bi-Color F3 use different color/patterns caudals	F4 Should start to see some Multi colored guppies.
	NOTE	2e	Best Multi	Green	If the size of your crosses are a problem
17	Bi-Colors		Most Solid Colored Caudals (Non half black females)	Grass	
18	Bi-Colors		Most Solid Colored Caudals (Non half black females)	Mosaic	
19	Bi-Colors		Most Solid Colored Caudals (Non half black females)	Yellow Galaxy	
20	HB Green		Green	Black	Dark HB Green, Black, etc
21	HB Blue		Blue	Black	HB Blue, HB Purple, Black, etc
22	Multis		Vienna Swordtail	Blue	Big bodied Multis , Veils etc Breeder # 2 says **
23	Big Bodied Swordtails		Vienna Swordtail	Green	Mike Lastella Cross (Swords, (Bi-Colors and Multis crazy colors))
24	Multis		Green	Vienna Swordtail	Multis, Bi-Colors , Good Swords and Blunted Swords
* BREEDER #1 If I had neither I would take a black male and cross to a green female.					
To get HB purples I would use a purple female. My crosses are dependent on size and color.					
If the greens or purples are too dark then selecting a light green female. I would cross a green female into my hb purple to lighten it up.					

	To make greens darker I'd cross a purple female.			
**	BREEDER #2 1. Vari snake to HB Blue, HB Pastel etc. 2. HB Blue X HB Pastel 3. HB Pastel X HB Blue 4 HB Blue X HB Yellow			
	What's most important is HB bodies and dorsal size.			
	Pattern is secondary and improves with each generation. Do Not breed beyond f3 as sex ratios are effected ...			
***	BREEDER #3 I have made multis using bronze females. I have crossed yellows through bronze and made very nice multis.			
	A lot of people will use snakes.			
	With my lace lines I still get snake type pattern in the body. This can clean up in F2. I have also made multis using Pastels,			
	but it takes sib breeding on the F2 and F3 to get to Multis			
	Then I cross patterned de ales with the patterned brothers. Another way is to use HB Pastel crossed through Greens or Blues.			
	You would need a line of NON "Y" LINKED HB to do this as ibises the males.			
Chart 10				

If you only have one filter in your tank do not change that filter when you are doing a water change. If you must change the filter, you can gently rinse the filter (not killing all of the good bacteria) but do not put new filter floss or a new filter in the tank. It is to your advantage if you have two filters in each tank. You can replace one filter with a new one , leaving the other filter in the tank. What I do when I have one filter in a tank is I throw half of the old filter material away and replace that half with new filter floss. The remaining old filter floss is gently rinsed and put into the cleaned box filter along with the new half of the filter floss on top of the old filter floss.

The brush is use to clean the stems of the box filter when you are changing the filter floss of your box filters.

Marina Aquarium Brush Kit

Blue Ribbon Filter Floss

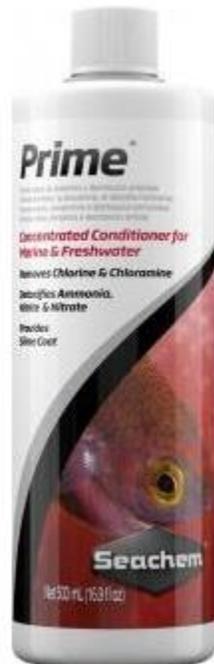


ATI Hydro Sponge Filter Mini



Products used to treat your water

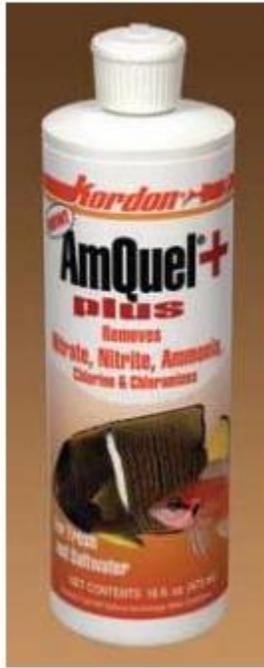
Seachem Prime



API Stress Coat Plus



Amquel Plus



Pro-Heat 50 Watt Submersible Glass Heater



Thermometer



Brine Shrimp Net



Python No Spill Clean & Fill



Outdoor Weatherproof Wireless Remote Control with 3 Conductor Outlet to turn on / off the utility pump below that is used to move water when attached to a hose.



Utility Pump, Stainless Steel, 115 V



1000-Watt to 1500-Watt 3-Element Infrared Quartz Heater with Remote Control and LED Display

To be used if you have an enclosed room and want to control the room temperature.

