What to do with your pond in hot weather

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The Pragmatic Aquarist

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What To Do With Your Pond in Hot Weather



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Let's get the hard truth out of the way first. The honest answer to what to do with your pond in hot weather starts with what you can't do, and that's keep your pond cool. Not really. You can take the edge off with a bit of shade, and I'll come to that, but if the ambient temperature is heading north of 30 degrees, your pond is heading that way too. Trying to actually cool it is a fool's errand.

Here's the good news though, and it's the whole point of this article. You can't keep your pond cool, but you can keep your fish alive. And that is absolutely something you can control. So in this piece I'll answer the questions I get asked every time the temperature spikes: what do I do with my pond in hot weather, how do I keep my pond cool in a heatwave, and why are my fish suddenly hanging at the surface gasping? The answer to all three comes down to one thing, and it isn't temperature.

Why hot weather is really about oxygen, not temperature

If you've ever driven past a farmer's field in hot weather, you'll have seen the big sprinklers throwing huge jets of water across the crops. Drive past a commercial fishery and you'll see exactly the same thing, great big paddle wheels and aerators chucking water around the surface of the pools. None of that is for show. It's all there for a reason.

Now, the farmer is doing it to stop his crops drying out. That's a different worry to yours. Your fish aren't going to dry out. But the fishery is doing it for the same reason you should be paying attention this summer, and that's oxygen. Because here's the bit most people don't realise: warm water holds far less dissolved oxygen than cold water does.

This isn't a small effect, either. As your pond warms up, its ability to hold oxygen drops away noticeably. Look at the numbers:

Water temperature	Maximum dissolved oxygen
15°C (a mild day)	around 10.1 mg per litre
20°C	around 9.1 mg per litre
25°C (a hot spell)	around 8.3 mg per litre
35°C (a serious heatwave)	around 7.0 mg per litre

So if your pond climbs from a comfortable 15 degrees to a sweltering 25, the water can hold nearly a fifth less oxygen than it could before. Push it higher still and you lose more. And remember, that's the

maximum the water can physically hold. The actual amount in your pond is usually lower, because your fish, your plants and the bacteria in your filter are all using it up around the clock.

Add to that the fact that warm fish have a faster metabolism and need more oxygen, not less, and you can see how the maths starts working against you. Less oxygen available, more oxygen demanded. That's why fish that were perfectly happy in June suddenly start hanging at the surface, mouthing for air, when a hot spell hits. They're not being dramatic. They're telling you something.

And it doesn't stop at the gasping. A fish that's struggling for oxygen is a stressed fish, and stress is what knocks down their immune system. So a hot, low-oxygen spell doesn't just leave fish gulping at the surface, it can leave them run down and open to disease in the days that follow. That's why the few simple steps below matter even when the worst of the heat has passed.

Can your fish even cope with the heat? (mostly, yes)

Here's something that surprises people. The vast majority of koi and goldfish sold in this country these days are bred in hot countries, Israel being one of the big ones. These fish are raised in serious heat from day one, so warm water in itself doesn't actually bother them. They're built for it. And the breeders out there are experts at providing the oxygen their fish need at those temperatures, which is exactly the job I've been describing above.

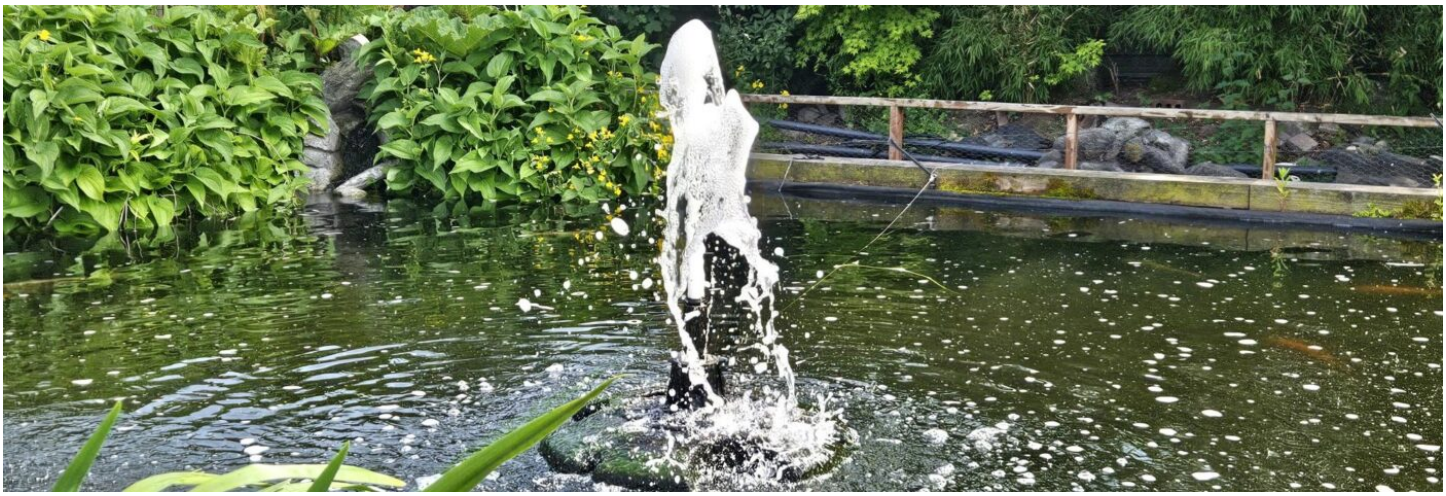
What those countries don't tend to have is our weather. A hot but stable climate is one thing. The British summer, where you can get a blazing 30-degree afternoon followed by a cold night and a thundery downpour, is another thing entirely. It's the dramatic swings in temperature that catch fish out, far more than the heat on its own. So the goal isn't to fight the warmth, it's to keep your oxygen up and avoid throwing sudden changes at them. That's why I said go steady with the hose earlier. A pond that sits at a warm but steady temperature is far kinder to your fish than one that lurches up and down day to day.

What you can actually do (the oxygen toolkit)

Right, the practical bit. The whole game in hot weather is getting more oxygen into the water, and the way you do that is by disturbing the surface. Oxygen dissolves into water where air meets water, so the more you break up that surface, the more oxygen goes in. Here's how I'd tackle it, from the simplest fix to the emergency measures.

1. **Add an air pump.** This is the single best thing you can do, and it's cheap to run. A pond air pump with an air stone sat in the pond pushes a constant column of bubbles up through the water, and every one of those bubbles is dragging oxygen in. If you only do one thing on this list, do this. Plenty of serious koi keepers run air stones all year round for exactly this reason. If you've got a larger pond, a floating aerator does the same job on a bigger scale, sitting on the surface and throwing up a plume of oxygenating water (this one even has an LED built in for the evenings).
2. **Raise your filter and pump outlets.** If your return from the filter or pump currently sits below the waterline, lift it so it splashes back down onto the surface. That splash is free surface agitation. The more turbulence you can create at the top of the pond, the better. A waterfall or a fountain does the same job, so if you've got one, make sure it's running.
3. **Clean your pump out.** A clogged, gunged-up pump is moving a fraction of the water it should be. Give it a proper clean so it's delivering its full flow rate, and you can improve the circulation it provides by up to 40 percent. That's a big gain in oxygenated, moving water for the cost of ten minutes and a bucket of pond water.
4. **The emergency hose trick.** If things get really bad and your fish are visibly struggling, get the garden hose out. Put it on the finest sprinkler or mist setting you have, and point it skywards over the pond. You're doing two jobs at once here: you're adding a little cooler water, and far more importantly you're hammering the surface with droplets and driving oxygen straight in. Just go steady on the volume so you're not swinging the temperature or chemistry too fast.

The simplest way to think about all of this: the best thing for your fish in a heatwave would be you standing at the pond all day, splashing the surface with your hand. Obviously nobody can do that. So everything on the list above is really just a way of automating that splashing for you. Anything that keeps the surface moving is helping your fish breathe.



Breaking the surface is how oxygen gets into the water. The more agitation, the better.

Feeding and filter care in the heat

Warm water speeds your fish's metabolism right up, and that means they get hungry. A good deal hungrier than they are in cooler weather. So summer is actually the time they can take more food, and feeding them well helps keep them in good condition through the stress of the heat. Little and often is the way, and never leave uneaten food to rot, because that fouls the water and robs you of oxygen just when you need it most.

Two things go hand in hand with more feeding. The first is your filter. More food in means more waste out, so your filter is working harder than usual. Step your maintenance up to match, keeping it clean and flowing so it can cope with the extra load. And remember, a clean, well-flowing filter and pump are doing your oxygen levels a favour at the same time, as we covered above.

The second is the quality of what you're feeding. If I were going to spend money anywhere, it would be here. A good probiotic pond food means every mouthful your fish take is full of usable, digestible content that does them good. Cheaper foods are a bit like junk food for us humans. They fill the fish up, but a lot of it passes straight through as waste, which then loads your filter and fouls your water on the very week you can least afford it. Better food in means healthier fish and less mess to deal with.



Warmer water means hungrier fish. Feed well, but never let uneaten food sit and rot.

A word on shade (it helps, but it won't save you)

Shade does earn a mention, because taking the direct sun off the water does slow the heating down. A parasol, a garden sail stretched over the pond, or even a few well-placed marginal plants and lilies covering part of the surface will all take a bit of the edge off. As a bonus, shading the surface tends to slow algae down too, and makes the pond less visible to herons.

But be honest with yourself about what shade can and can't do. It slows the rise. It doesn't stop it. If the air temperature is sitting in the thirties for a week, your pond is going to get warm whatever you drape over it. So treat shade as a helpful extra, not the solution. The oxygen is where the real work happens.

One last thing on shade, more of a curiosity than a common problem. It has been known for white koi to catch the sun and effectively get sunburn on their backs in a prolonged hot spell. It's a rare occurrence and not something to lose sleep over, but if you keep white-bodied fish, a bit of shade over the pond is cheap insurance against it.

The treatment trap (read this before you reach for a flocculant)

This is the one that catches people out, so please read it carefully. In hot weather, my strong advice is to avoid using any unnecessary treatments in your pond at all.

The reason is simple. A lot of pond treatments consume oxygen as they work, and in a heatwave your oxygen is already in short supply. The worst offender is flocculants, which is exactly the thing a lot of

people reach for in summer because their pond has gone cloudy and they want it clear again. The trouble is, you'd be dosing an oxygen-hungry product into already oxygen-starved water on the hottest week of the year. I've seen it cause real problems, and in a heavily stocked pond it can tip struggling fish over the edge.

If you absolutely have to treat, do it first thing in the morning. Oxygen levels recover overnight when the water is at its coolest, so dawn is when your pond has the most in reserve to spare. Dosing in the heat of the afternoon, when oxygen is already at its lowest, is asking for trouble. And run your air pump hard while the treatment does its work.

It's also worth saying that a cloudy pond in summer is usually a symptom of something going on underneath, not a problem to be papered over with a quick-fix bottle. Clearing it properly is a separate subject, and a heatwave is the wrong moment to be experimenting. If green or cloudy water is your real worry, park it until the weather breaks and tackle the root cause then.

The bottom line

Every pond is different, but the principles in hot weather are the same for all of them. If you remember nothing else, remember this:

- You can't keep your pond cool, so stop trying. Focus on keeping your fish alive instead.
- Warm water holds far less oxygen, and your fish need more of it, not less. That's the real danger, not the temperature itself.
- Your fish are mostly bred for heat. It's the sudden temperature swings that catch them out, so avoid sharp changes.
- Get oxygen into the water by disturbing the surface: an air pump, raised splashing outlets, a clean well-flowing pump, and the hose-mist trick in an emergency.
- They'll be hungrier, so feed well, ideally a probiotic food, and step up filter maintenance to match.
- Shade helps a little. It is not a substitute for aeration.
- Avoid treatments in the heat, especially flocculants. If you must dose, do it at dawn with the air pump running.

Do those few things and you'll get your fish through the hottest spell of the year in good shape. If you're not sure what your pond needs, come and have a chat with us. We've been getting fish through British summers since 1939, and there's no question too daft to ask.

About the author

Richard Cook is the Managing Director of Shirley Aquatics, a family-run aquatics business that has been serving fishkeepers since 1939. A third-generation aquatic retailer with over 35 years of hands-on experience, Richard is the voice behind The Pragmatic Aquarist, known for his honest, no-nonsense approach to fishkeeping advice that helps customers make confident decisions that work in the real world, not just on paper.