



Coconut milk as a substitute for liquid fish

Posted by [Josh Willis](#)

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[Josh Willis](#)

[Coconut milk as a substitute for liquid fish](#)

January 04, 2023 09:08PM

Registered: 6 years ago

Posts: 134

As I reviewed HON's page for holistic spray ingredients, I was reminded that Michael suggested using coconut milk as a sub for liquid fish, for vegetarians looking for an alternative. I'm not veggie, but I do have neighbors that, even on our 7 acres, are close enough that I try to be considerate of what we spray. I could imagine this is even more true for people in the burbs and cities. This is to say, liquid fish may not be everybody's cup of tea.

Has anyone tried this? And would this be at the same rates as liquid fish?

Michael suggested the fatty acids in coconut milk are comparable to liquid fish. Does anyone have an argument for why liquid fish is much better nutritionally in other ways?

Thanks!

Earthworks

Zone 7a in West-Central MD

Non-commercial, ~100 fruit trees, dwarf to MM106

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[Mike Biltonen](#)

[Re: Coconut milk as a substitute for liquid fish](#)

January 05, 2023 03:03PM

Registered: 11 years ago

Posts: 298

I was very intrigued by this question and so did some digging. Basically, and based on about 30 minutes of internet research, here is what I can tell you: coconut milk and fish are two wildly different substances when comparing their nutritional components. Coconut milk is 67% water, 24% fat (MCTs - which I will come back to in a minute), 5.5% carbs, 2.25% protein, and little else (very minute amounts of minerals and vitamins). Fish hydrolysate (vs emulsion which you should NEVER use) is very little water (actual % depends on processing method), 38% protein (N, amino acids, enzymes), 5% vitamin D, 2% iron, and only 1% fat (MCT). So, comparing fat to fat (MCTs or medium chain triglycerides) is wildly different; and it is the MCTs (regardless of course) that give the FAK its kick. Comparing protein to protein fish has 18 times more protein than coconut milk; fat to fat coconut milk has 24 times as much as fish. So the amount of fish you would need to use to get the same amount of MCTs from fish is 24 times as much (or if the std rate for fish is 1 fl oz per gal water, then you'd need 24 oz of coconut milk per gallon of water). From the protein perspective, you need 18x as much coconut milk as fish. So, as you see, they are wildly different substances. Now, if you used coconut oil (also known as MCT oil) then you are concentrating the fat power from the coconut and you would get 11.5g of fat from a single tablespoon of coconut oil - which is 5x the fatty acid power of milk. So if you are seeking only the fatty acid component of coconut using the oil is by far the better choice (though I do not know about cost). Fish oil has about 14g fat per tablespoon. Digging deeper: Coconut oil is composed of the fatty acids, caprylic acid C-8:0 (8%), capric acid, C-10:0,(7%), lauric acid C-12:0, (49%), myristic acid C-14:0(8%), palmitic acid C-16:0 (8%), stearic acid C-18:0 (2%), oleic acid C-18:1 (6%) and 2% of C-18:2 linoleic acid. Fish oil contains two omega-3s called docosahexaenoic acid (DHA) and eicosapentaenoic acid (EPA). So from a diversity standpoint, coconut is way better than fish for the fats and oils. There doesn't seem to be much info on the other fats that may be in fish. Also, fat % varies by fish species; flax, chia, and hemp seeds far exceed the amount of omega 3 FAs that fish contains.

What to do? If you're after protein (N, amino acids, enzymes, etc.) stick with fish. If you're after the fatty acids, stick with....well, coconut milk. Using the oil versions of each will increase the fatty acid % to the point where they are about equal, but I suspect cost would be astronomical - and you've stripped out all of the "good stuff" to get at the oil and are missing the entourage effect. And then to the question of plant-based (yes, I know that coconut is a plant) solutions, things like nettles, comfrey, dock, etc. esp after they've gone to seed will provide a high content of FAs, This is research I am currently looking at to see which plants provide the greatest nutritional content based on verified biochemical and phytochemical composition.

Hope this helps and doesn't confound. If anyone knows more, please chime in.

[Mike Biltonen, Know Your Roots](#)

Zone 5b in New York

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[Brittany Kordick](#)

[Re: Coconut milk as a substitute for liquid fish](#)

January 05, 2023 03:52PM

Registered: 4 years ago

Posts: 211

Thanks for crunching those numbers -- this is awesome info to have! We became interested in using coconut milk two or three years ago, but didn't get any farther than idly sourcing bulk quantities of the stuff. As you mention, it became rather quickly apparent that it did not make any kind of financial sense. However, I've had it in the back of my mind to keep tabs and check back -- coconut products have become so trendy, perhaps a glut may potentially lead to an increase in availability and a decrease in price. And in any case, if you're just a hobbyist with a dozen trees, particularly, young, immature trees, one big ten-can of coconut milk may go far enough in your orchard that cost doesn't seem nearly as much of an issue as it does on a commercial scale.

[Kordick Family Farm](#)

Westfield, NC

Zone 7a

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[Josh Willis](#)

[Re: Coconut milk as a substitute for liquid fish](#)

January 05, 2023 07:53PM

Registered: 6 years ago

Posts: 134

Thanks, Mike! That is awesome to see all the details listed out.

I was confused on one section of your analysis, where you reference fish to itself, "So the amount of fish you would need to use to get the same amount of MCTs from fish is 24 times as much (or if the std rate for fish is 1 fl oz per gal water, then you'd need 24 oz of coconut milk per gallon of water)." Given the higher fat percentage of coconut, did you mean to say the amount of fish you need to get the same amount of MCTs from *coconut* is 24 times as much...? In which case, that would suggest much less coconut is required? Sorry if I am not understanding your point there.

Well based on what you say, I'm inclined to just keep with fish, and choose a weekday when my neighbors are less likely to be home. :) The protein, esp. the N and amino acids, are presumably a big kick for fueling microbial activity. Maybe I add a bit of coconut milk just to add that extra FAK kick, too.

For the vegetarians out there, or backyard growers in the burbs or cities, I suppose the next idea would be to find a complex protein source, perhaps some legume powder, to mix in addition to coconut. But that is presumably a lot of work or pretty expensive.

Anyways, good info to think about. Thank you!

Earthworks

Zone 7a in West-Central MD

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[Mike Biltonen](#)

[Re: Coconut milk as a substitute for liquid fish](#)

January 06, 2023 04:16AM

Registered: 11 years ago

Posts: 298

Yes, Josh, you are right, I flubbed it. I did look over what I wrote probably 6 times before I sent it, looking for incongruousness, but I missed one. Bottom line Fish=protein, coconut=FAs. Thanks for pointing that out and sorry if anyone else was wondering..what? what!

[Mike Biltonen, Know Your Roots](#)

Zone 5b in New York

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[Josh Willis](#)

[Re: Coconut milk as a substitute for liquid fish](#)

January 06, 2023 06:03AM

Registered: 6 years ago

Posts: 134

Thanks as always, Mike!

Earthworks

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