

FISHERMEN'S NEWS

The Advocate for the Commercial Fisherman



Pacific Coast Federation of Fishermen's Associations

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The Domoic Acid Situation *By Dave Bitts and Tim Sloane*

AS WE WRITE THIS IN EARLY January, Oregon and Washington are just beginning their Dungeness crab seasons. We hope that as you read this, California has also started fishing. If not, we're months late.

Dungeness crab fishermen on the West Coast are all feeling varying degrees of financial pressure and stir-craziness due to a naturally occurring substance called domoic acid (DA) in Dungeness crabs. It is linked to blooms of the algae pseudo-nitzschia, blooms associated with higher than normal sea temperatures and possibly higher ocean acidity.

It's something none of us want to mess with. Forensic work associated with the only incident of human illness caused by DA established that people can get sick from shellfish with about 300 parts per million (ppm) DA concentrations. Because of persistent retention in this year's crabs, the California, Oregon and Washington fleets and governments took cooperative steps to protect the public from exposure.

The West Coast states have established 30 ppm in crab viscera – 10 percent of the threat level – as the action threshold level that determines whether we fish. That meant indefinite delays until the crabs were certified by public health agencies as clear of this harmful substance. In order to open a season, all crab viscera samples tested must come in

under the threshold for two consecutive tests. Incidentally, the relationship between the presence of DA in viscera and DA in meat isn't well understood, although we know that crab meat tends to have much less DA than viscera.

The current DA outbreak began last summer and is the most serious, widespread, and prolonged we have ever experienced on the West Coast. Alerted by a summer closure of the crab season in Washington and reports of high DA levels in the Monterey area, California began testing crabs in September. They tested very high.

Testing has continued since then on a somewhat regular basis. Each port's samples typically have from six to ten crabs, which have varied in their DA levels, often well above or below the threshold. Since all crabs must clear the threshold for a test to be considered clean, we're most concerned with the highest sample; as of early January, most ports from Crescent City to Half Moon Bay had at least one crab over the threshold.

California's Response

The California Fish & Game Code empowers the Office of Environmental Health Hazard Assessment and the Department of Public Health to determine whether there's a public health risk from a given fish or shellfish. If so, they notify the Department of

Fish and Wildlife (CDFW). CDFW then decides whether to shut down the fishery until the danger passes, which they'll do if they've any sense at all. When the health agencies determine the risk is over, they inform CDFW, which then decides whether to open the fishery.

This is exactly what happened with the California crab fishery this year. The public health agencies are in charge of the standards and thresholds and the continuing crab testing. They have made it very clear that public health is not just their main concern; it's their only concern. Thanks to their diligence, no one has gotten sick from a crab caught off California (or Oregon or Washington for that matter). And thanks to their conservative threshold, it's extremely unlikely that anyone will ever get sick once we're fishing again.

Industry Response

No one, fisherman, crab wholesaler, grocer or restaurateur, wants to be the one who sold a crab that made someone sick. No one wants to face the long-term consequences to our markets that would result from selling a crab that caused someone to get hurt.

To ensure that the public remains safe, California commercial crabbers have taken the most conservative approach possible: we have been almost unanimous – so far – in wanting the whole state to stay closed until we're all



clean. In other words, no one fishes here until every port has two clean tests. We're concerned with 1) boundary issues: if my port's clean but yours isn't quite, how close to your port do I fish? How far do crabs move? And 2) consumer confidence: how does the public know the crab they're buying is clean if they can see on the CDPH website that Port X still has dirty crabs? Once Port X and all the other ports test clean, there's no place a dirty crab could come from.

Fair Start

CDFW has determined that this season's delay for public health reasons legally meets the standard of "delay" which triggers "Fair Start" provisions: if you fish elsewhere while one area is delayed, you can't fish in the delayed area until 30 days after it opens. A set of answers to more detailed questions about Fair Start rules was mailed to all California Dungeness crab permit holders.

Glitches and Nitpicks

The authors believe that the States' response to this unprecedented DA situation has been, overall, very good. However, there have been some glitches in the details, and as usual, probably more questions raised than answered. To name a few:

Adequacy of Sampling: Can a six to ten crab sample really represent what's happening across the area of seafloor fished by that port? To what extent does the threshold at 10 percent of danger level compensate for the sparse sampling? Should testing take place locally, rather than at one centralized facility? Should fishermen have more of a say in the at-sea testing locations? Is CDPH enforcing a standard methodology for collecting and transporting samples?

Cost of Sampling: How do we fairly compensate the fishermen who volunteered their time, boats, gas and gear to obtain the crabs that were then tested by the California Department of Public Health? At least one local marketing association picked up the tab for their guys, but would government reimbursement be appropriate?

Testing Capacity: There has been concern as to bottlenecks at laboratories where sampled crabs are tested. Could other labs be brought online to increase sample processing capacity? Who would pay? We would like to ensure that any fishing delays are due to public health concerns, and not a slow turnaround of testing results.

Sample Turnaround Time: We've heard that once samples reach the lab, results can be published within a day – but in California it has taken 10 days or more to get results to the fleet. As we approach clean tests this will become more of an issue. We recognize that nothing can get tested fast enough when you're forced to be sitting on your butt, waiting to go to work – but our livelihoods are on the line.

Season Opening Protocol: It would be sweet if the time from delivering the second clean set of samples to the fishery starting date could be reduced to days, not weeks; how?

Scientific Gaps: What about the large variation in DA levels within each six- to ten-crab sample? Is this just the way

it is? Is there any way we can prevent this from happening in the future? Are the safety threshold levels accurate? How do we fund research on these questions?

Restoring Consumer Confidence: Oregon felt the DA pain as well, but their Crab Commission immediately went to work as a coordinating body doing a mass media campaign touting the safety and deliciousness of Oregon Dungeness. Does California need a similar agency to do the critical media work if this scenario were to happen again? How do we fund such a group?

Disaster? Relief?

The elephant in the room is that crabbers are hurting financially because of the delay. Crabbing in the southern reaches of Dungeness territory in California typically opens on November 15, and the North opens on December 1, in time for big consumer demand spikes for the Thanksgiving, Christmas and New Years holidays. We've heard that as much of 80 percent of the crab fleet's income usually comes in between November 15 and January 1. We missed those markets, and we cannot predict how any lingering demand might be tainted by bruised consumer confidence in our products. Bills aren't delayed when fishing is.

On the flip side, the crab season starts have been delayed before, briefly in 1991 by a DA scare, until as late as January 15 by quality concerns (i.e., meat recovery of less than 25 percent) and once even later by a price dispute. And the crabs are still in the water, freshening up and clearing themselves of any taint. It's still possible we could come out of this with a decent season. We're holding out hope.

But if California is still not fishing as you read this because DA levels are still over the threshold, the California crab season is approaching a state of disaster. Consumers thankfully will have the chance to eat Washington and Oregon crabs, but most of the nearly 500 active California crabbers depend on crabbing for a big portion of their yearly income. We may be facing either a season delayed so long its value is a fraction of normal: mating and molting seasons could put a real whammy on volume and value, not to mention processors' need to focus on other products, like shrimp, if the delay lasts into spring. At worst, we could be looking at no crab season at all in California. As of this writing we just don't know.

If the crabs keep ingesting and holding onto DA, at some point it will be time to declare a fishery disaster and seek financial relief from the state or federal governments. When? This is where the confusion begins.

Crabbers aren't unanimous on when, or if, a disaster appeal will be appropriate. The pain has pushed many to suggest declaring the disaster ASAP and calling the season a wash. But that might have the effect of stopping guys who might still want to fish, even though we missed the most productive part of the season. There are plenty of crabbers who make solid livings fishing after January 1 in a normal year.

Of course, no one has come out and officially told us that disaster relief and fishing are mutually exclusive, and



indeed, we fished limited seasons after the 2006 Klamath Salmon Disaster. But that begs the question of how we quantify disaster. We only get one shot at asking for, and putting a dollar amount to, disaster relief. Is it really a disaster if the crabs are still out in the water? If so, we're certain to get pushback from those who hold the purse strings.

Efforts to secure emergency unemployment disbursements for crewmen from the state have been unproductive so far; there have been hints that we could ride the coattails of a more general disaster declaration, perhaps because of other El Niño impacts, but we can't be wishing that on the state however much we're hoping for a wet and snowy winter. And on the federal side, both Magnuson and the Interjurisdictional Fisheries Act provide for declarations of stand-alone fishery disasters and relief. But there's still a lot of head-scratching, at least, between us and a clear path to relief – if relief is needed.

It may be that this is where we most need to ask ourselves what we might want to do differently next time. We don't know for certain what caused the algal bloom that produced all this DA, but, if warmer and more acidic water were indeed factors, we could be looking at this sort of thing again and again. While it's hard to say that any specific event was caused

by climate change, it's even harder in this case to say that it wasn't.

In the very near future we may be looking at a wide range of farming, fishing, and other disasters, none of which can be blamed with total certainty on climate change, but all its likely products. Shall we treat each one on an ad hoc basis, as a bewildering and unexpected event? Or can we learn from this domoic acid disaster (if it becomes one), and perhaps develop a model or even a plan or, golly gee, a disaster relief fund for coping with these and other similar consequences of climate change?

For the very latest information, see the current State of California information web sites: www.cdph.ca.gov/HealthInfo/Pages/fdbDomoicAcidInfo.aspx, and FAQs: www.cdph.ca.gov/pubsforms/Documents/fdbSSdaFAQ.pdf. **EN**

Dave Bitts is the current President of the Pacific Coast Federation of Fishermen's Associations (PCFFA). Tim Sloane is PCFFA Executive Director. Both can be reached at PCFFA's Southwest Regional Office at PO Box 29370, San Francisco, CA 94129-0370, (415) 561-5080 or by email to: tsloane@ifrfish.org.