

## Aquaculture Production Expected To Double

by Johnny Foster

Will aquaculture become a significant contributor of food, medicine or fuel in the not-too-distant future? Will major economic activity be generated by a broad new industry? What are the constraints to development, and what is the realistic potential for aquaculture in the United States...and the world?

These questions are very important to potential investors, entrepreneurs, farmers and bureaucrats. In fact, anyone interested in the subject of commercial aquaculture must develop opinions about its future.

One interesting report has been published by a business-research company in New York. Status of Aquaculture in the United States is published by FIND-SVP and costs \$295.00. I read a summary of the report in Aquaculture Digest magazine. Here are some conclusions in the report:

- Two major problems facing the aquaculture industry are the lack of investment capital and the need for more research.
- U.S. aquaculture sales now \$148.5 million are expected to grow to \$412.5 million by 1985 if the private sector properly develops markets.
- Within the next 20 years aquaculture may become the most productive protein delivery system in the U.S.
- Low-cost, warm-water species, such as tilapia and buffalofish, yielding the most protein for the least cost, are predicted to become major sources of food. But markets need to be developed.
- Artificial systems using recirculated water have tremendous potential if

research continues.

Although broadly stated, I believe these conclusions are reasonable. The aquaculture industry will grow. People are beginning to eat more fish and they are demanding a product more consistent in quality. Commercial fish stocks are being fully exploited. Some stocks are already declining. The cost of fish will increase. More food and sport fishes will come from farms.

Dr. Harry Dupree from the Fish Farming Experimental Station in Stuttgart, Arkansas feels aquaculture has a bright future and will expand significantly over the next 20 years. He says recreational fishing and hobby fish farming will expand as people have more leisure time. Most expansion will be in warm-water areas. Selective breeding of catfish and trout will be emphasized to produce faster-growing fish. The various species of Chinese carp will be cultured more.

Dupree thinks culture facilities, feed mills, processing plants and marketing outlets will have common or cooperative ownership. Marketing activities will accelerate. New fisheries products will be developed for the working couple. Fish products will be developed for export markets.

Fish farming will be integrated with agriculture. Irrigation water will be used for fish production before being used on crops. Fish and crop rotation will become a standard farming practice.

OK. Aquaculture will grow, but how fast? The

state of the economy offers the major constraint, and who can predict what it will do? Suitable water for aquaculture is declining. Diseases, and product quality must be controlled. Improvements in genetics and water quality management are necessary. But most importantly, people must be stimulated to eat more fisheries products.

Nevertheless, I predict aquaculture production will double by late 1987 in North Carolina. More catfish and trout will be produced. A new state bottom-leasing program on the cost will increase production of clams and oysters. Marine fish and scallops may be cultured over leased bottoms towards the end of this five years.

Greenhouses will be used to integrate fish and plant production. Even a few prawns (freshwater shrimp) weighing one-quarter pound each may be produced in the greenhouses. Hobbyists will use cages to grow catfish and tilapia in the summer and rainbow trout in the winter. Homeowners will build water gardens to enhance their landscape.

Aquaculture will produce fingerling sportfish for stocking private ponds and fee fishing lakes. The state may even buy fish and shellfish for stocking rivers and sounds. Research will identify suitable new species and locations.

After 1987 I think aquaculture production will at least double again in the following five years.

## Youth Day

Youth Day will be observed at the Hawkins Chapel A.M.E. Zion Church at 1:30 P.M. on July 4. Rev. William Hines of Gatesville, N.C. will be the speaker for this occasion.

There will be special music furnished by the Young Believers of Edenton. The public is invited to attend.

## The Carolina Review

**MORE BASIC QUESTION...** With this week's primary election and surrounding hoopla, the final adjournment of the North Carolina General Assembly last Wednesday seems a long time ago. Then again, the legislators have been meeting with such regularity that maybe the people in Raleigh have become somewhat bored by it all and pay no attention.

As previously reported, the legislators came back to Raleigh for an extra week because of two hang-ups in education. Those problems were settled rather quickly when teachers were awarded an extra two "snow" days of leave time and when efforts to remove the budget office from the Department of Public Education were short-circuited. Senators calling for re-location of the budget office (into the governor's office) were appeased by plans to study the much-maligned effectiveness of the office now in the Department of Public Education.

Then another problem that had been simmering for several days erupted between conservative legislative leaders who usually share the same viewpoint.

The argument was over a new health insurance plan for state employees and teachers. The new plan, already approved, calls for the state to build up its own investment reserve for insurance purposes rather than buying group insurance as a company would for its individual employees. Because of its vast employee resource and payment structure, the state figures to save money by insuring itself and paying only to have the system administered. So far, so good.

But the state employees were previously insured by Blue Cross and Blue Shield of North Carolina - in Durham.

Sen. Kenneth Royall represents Durham and he is one of the most powerful and influential members of the legislature. One can

easily understand why Sen. Royall would want at least to have Blue Cross and Blue Shield awarded the contract for administering the new insurance plan.

Sen. Harold Hardison, chairman of the Senate Appropriations Committee and a close Senate ally of Sen. Royall's, agreed.

A third powerful legislative leader from the House side, Rep. Billy Watkins, disagreed. A Texas outfit, Electronic Data Systems, Inc. of Dallas, had submitted a bid \$6.3 million less than the Blue Cross bid. Watkins wanted the contract to go to the Dallas-based company.

The controversy, touched off by the insurance plan, went much further. The more basic question was who should award state contracts, the administrative branch or the legislative branch?

Historically, contract awards have been decided through the administrative branch because it was thought they could better divorce themselves from a limited constituency and partisan politics and look at the whole picture.

That idea won out when compromise wording was worked out, directing the state budget officer (in the administrative branch) to award the contract to the

"lowest responsible bidder."

A couple of days later, after the lawmakers went home, state budget officer John A. Williams awarded the contract to Electronic Data Systems, Inc. The next day, Blue Cross and Blue Shield of North Carolina announced it would soon be laying off employees - in Durham.

## Lord's Supper To Be Observed

The Sacrament of Holy Communion will be celebrated at the Edenton United Methodist Church during the morning worship service at 11 A.M., July 4th. The chancel choir will sing two anthems: "The Lord's My Shepherd" and "Mine Eyes Have Seen The Glory."

The special committee on Evangelism (CORE) and the leaders of the Neighborhood Groups for Evangelism will meet at the church on July 7, 7:30 P.M. Mrs. C. B. (Thelma) Smith, the Chairperson of the Work Area on Evangelism, will preside over this meeting.

On April 12, 1776, North Carolina became the first colony to instruct its delegates to vote for independence in the Continental Congress.

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## Eastern Carolina Health Systems

The monthly meeting of the Eastern Carolina Health Systems Agency (ECHSA) will be held July 14, 1982, at 7:30 P.M. at the Ramada Inn, 264 By - Pass, Greenville, N.C.

The agenda will include but not be limited to the following: 1) Report of the Executive Director; and 2) Project Review Report and 3) Substantive Review Report: 1) Upjohn Health-care Services - establishment of Home Health Agency in Nash County and 2) East Carolina University

School of Medicine - construction and operation of a regional radiation oncology center.

For information on project reviews, contact: Director of Project Review, Eastern Carolina Health Systems Agency, 301 S. Evans St., Minges Building, Suite 405, Greenville, N.C. 27834, 919-758-1372.

The Eastern Carolina Health Systems Agency is a private, non-profit corporation funded by the U.S. Department of Health and Human Services.

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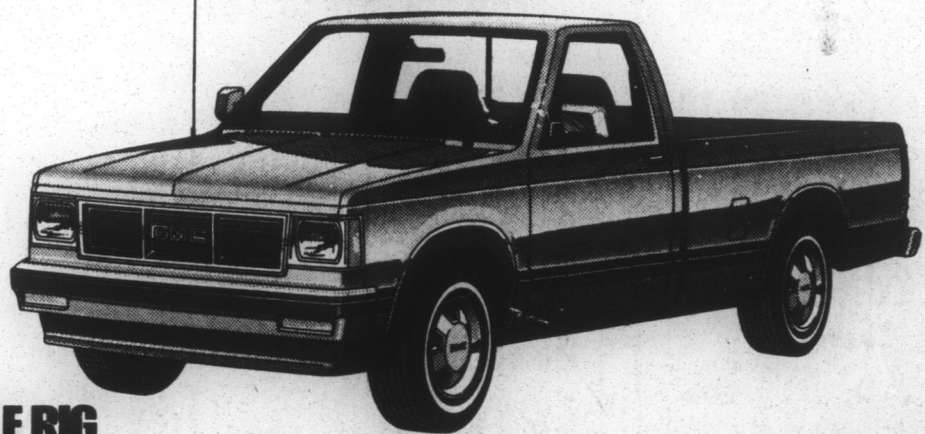
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