

APPROPRIATIONS REQUEST FORM OREGON HOUSE DELEGATION FISCAL YEAR 2010

DEADLINE FOR SUBMISSION: FEBRUARY 20, 2009

PLEASE NOTE: As required by the House Appropriations Committee, all requests will be made public on the requesting Member's website.

1. Project Title: Molluscan Broodstock, OR

2. Organization Name and address:

Oregon State University
Corvallis, Oregon 97331-4501

3. Primary Contact name, phone number, mobile phone number, fax number and email:

4. Project Location Address (if different from Organization): Corvallis, Oregon and Newport, Oregon

5. Please describe the requesting organization's main activities, and whether it is a public, private non-profit, or private for-profit entity:

Public University. Oregon State University is one of only two U.S. universities designated a land grant, sea grant, space grant and sun grant institution. Its more than 20,300 students come from all 50 states and more than 80 countries. OSU programs touch every county within Oregon, and its faculty teach and conduct research on issues of national and global significance.

6. Briefly describe the activity or project for which funding is requested (please keep to 500 words or less.)

The oyster industry on the West coast, US, mainly focuses on production of the Pacific oyster, *Crassostrea gigas* and, to a lesser degree, the Kumamoto oyster *C. sikamea*. The industry was established over a century ago and provides income and jobs to many coastal communities, with an overall dock-side production valued at about \$70 million per year. In contrast to many other U.S. agricultural commodities, there has been no long-term, funded research program to select and manage Pacific oyster broodstock for enhanced production.

In response to this need, the Molluscan Broodstock Program (MBP) was established in 1995 at Oregon State University as a Special Project of USDA-CSREES in order to implement a selective breeding program to improve broodstock and increase commercial production of Pacific oysters on the West Coast. Since MBP's inception, about 1500 oyster families have been planted and evaluated at commercial grow-out sites from Alaska to California. Top performing families have been selected and used as broodstock for production of subsequent generations. In addition, modern molecular genetic techniques (microsatellite analyses) have been applied to ensure accurate pedigrees of families. A rotational breeding scheme has been implemented to reduce and control the rate of deleterious inbreeding effects.

After two generations of selection, the average yield of oyster families derived from selected MBP broodstock is about 40% greater than that of families from industry broodstock; furthermore, the five top-performing families (recommended for commercial hatcheries) have an average yield that is 77% greater than that of families from non-selected industry broodstock. MBP broodstock oysters are now used in commercial hatcheries for large-scale seed production. The West Coast industry is very supportive of the program.

MBP also plans to begin a breeding program for Kumamoto oysters. This species of oyster is highly prized by consumers but it is slow growing and commercial broodstock are likely inbred due to poor broodstock management practices. In fall 2006, new Kumamoto broodstock oysters were brought back from Japan and are being reared in quarantine conditions. Certified disease-free Kumamoto broodstock will be released to industry in 2009.

In 2007 and 2008, shellfish hatcheries on the West coast have been struggling to produce oyster larvae (seed) due to unknown factors that seem to be linked with a change in ocean conditions. This lack of sufficient amounts of seed is jeopardizing the whole West coast oyster industry and is the most serious challenge that the industry has faced since hatcheries were built in the mid-1970's

In FY 2010, we are requesting funds 1) to carry out research to address the problem(s) of rearing oyster larvae in West coast hatcheries; 2) to continue the breeding program to improve yields and other desirable qualities of Pacific oysters, and 3) to implement a new breeding program for Kumamoto oysters.

7. Has this project received federal appropriations funding in past fiscal years?

Yes

7a. If yes, please provide fiscal year, Department, Account, and funding amount of any previous funding.

Funding was initiated in 1995. Below are funding levels for the last five years:

FY2004	USDA/CSREES	\$347,976
FY2005	USDA/CSREES	\$323,385
FY2006	USDA/CSREES	\$325,021
FY2007	USDA/CSREES	\$0
FY2008	USDA/CSREES	\$250,944
FY2009	USDA/CSREES	\$600,000 (requested)

8. Federal agency and account from which funds are requested (Please be specific –e.g. Department of Housing and Urban Development, Economic Development Initiatives account):
USDA/CSREES

9. What is the purpose of the project? Why is it a valuable use of taxpayer funds? How will the project support efforts to improve the economy and create jobs in Oregon?

According to Pacific Coast Shellfish Growers Association, the farm-gate value of oysters, clams, geoduck and mussels on the West Coast of the U.S. was \$111 million in 2005 with oysters accounting for 76% of the value of all shellfish produced. Oregon farms produce about 6 million lbs of oysters with a farm-gate value of about \$4.7 million (Pacific Coast Shellfish Growers Association). West Coast farms provide over 3,000 family-wage jobs in rural coastal communities. Including related

service sectors and suppliers, the total economic contribution of the shellfish farming community on the West Coast is estimated at \$278 million annually.

For the past three years, seawater quality conditions in the Pacific Ocean off the Oregon and Washington coasts have severely impacted hatchery production of seed oysters upon which both large and small oyster farms depend. These conditions have led to dire economic consequences for two of the four hatchery operators that produce oyster seed for farmers, including the largest producer of oyster larvae on the West Coast (Whiskey Creek Hatchery, Netarts Bay, Oregon) that accounts for approximately 75% of all larvae utilized by farmers.

West Coast oyster farms are already laying off employees due to lack of seed. Another year without adequate seed will likely result in the collapse of increasing numbers of farms and further job losses.

In 2008, the USDA-CSREES Special Project "The Molluscan Broodstock Program" (MBP) played a central role in addressing the seed crisis issue of commercial hatcheries by: 1) providing hatcheries with selected broodstock that produce progeny (larvae) that were reported to perform well, despite poor water quality conditions, 2) determining methods to improve seawater quality and 3) transferring seawater-treatment technology to the hatcheries.

Funding is requested to continue this work to meet the immediate urgent needs of West Coast oyster hatcheries so that they can restore seed production. In addition, funds are requested to continue a longer-term selective breeding program to improve both the performance of oyster larvae in hatcheries as well as oysters grown on farms.

10. Have you requested funding for this project from other Members of Congress?

If so, who? Support is being sought from the entire Oregon Congressional Delegation

11. Funding Details:

a. Total project cost (all funding sources and all years):

\$600K

b. Amount being requested for this project in Fiscal Year 2010:

\$600K

c. What other funding sources (local, regional, state) are contributing to this project or activity? (Please provide specific dollar amount or percentage.)

Oregon Sea Grant: \$97,307 2006-2008; Alaska Sea Grant: \$36,997 (2006-2008) and \$49,111 (2008-2010). Both Sea Grant organizations are supporting projects that complement MBP's activities. In addition, the West Coast shellfish industry supports the program by providing test sites and labor for evaluation of oyster families. The value of this support is estimated to be \$40,000 per year.

d. Do you expect to request federal funding in future years for this project?

Yes

e. Breakdown/budget of the amount you are requesting for this project in FY 2010.

(e.g. salary \$40,000; computer \$3,000):

Salaries: \$300,000

Benefits: \$180,000

Expendables/materials: \$100,000

Travel: \$20,000

f. Please list public or private organizations that have supported/endorsed this project:

Pacific Coast Shellfish Growers Association

Pacific Shellfish Institute

Aquila Pride Hatchery

Baywater Rankin Oyster Company, WA

Coast Oyster Company, WA

Hog Island Oyster Company, CA

Oregon Oyster Company, OR

Seims Sea Farms, AK

Taylor United, WA

Whiskey Creek Hatchery, OR

g. Is this project scalable? (i.e. if partial funding is awarded, will the organization be able to use the funds in FY 2010?):

Yes, but the scope of the project would need to be adjusted accordingly