

(B) the establishment and extension of various methods of planting, cultivating, harvesting, and processing supplemental and alternative crops;

(C) the transfer of such applied research to on-farm practice as soon as practicable;

(D) the establishment through grants, cooperative agreements, or other means of such processing, storage, and transportation facilities for supplemental and alternative crops as the Secretary determines will facilitate the achievement of a successful program; and

(E) the application of such other resources and expertise as the Secretary considers appropriate to support the program.

(3) The program may include, but shall not be limited to, agreements, grants, and other arrangements—

(A) to conduct comprehensive resource and infrastructure assessments;

(B) to develop and introduce supplemental and alternative income-producing crops;

(C) to develop and expand domestic and export markets for such crops;

(D) to provide technical assistance to farm owners and operators, marketing cooperative, and others;

(E) to conduct fundamental and applied research related to the development of new commercial products derived from natural plant material for industrial, medical, and agricultural applications; and

(F) to participate with colleges and universities, other Federal agencies, and private sector entities in conducting research described in subparagraph (E).

(d) The Secretary shall use the expertise and resources of the Agricultural Research Service, the Cooperative State Research Service, the Extension Service, and the land-grant colleges and universities for the purpose of carrying out this section.

Subtitle L—Aquaculture

PURPOSE

SEC. 1474. [7 U.S.C. 3321] It is the purpose of this subtitle to promote research and extension activities of the institutions hereinafter referred to in section 1475(b), and to coordinate their efforts as an integral part in the implementation of the National Aquaculture Act of 1980 (16 U.S.C. 2801 et seq.) by encouraging landowners, individuals, and commercial institutions to develop aquaculture production and facilities and sound aquacultural practices that will, through research and technology transfer programs, provide for the increased production and marketing of aquacultural food products.

AQUACULTURE ASSISTANCE PROGRAMS

SEC. 1475. [7 U.S.C. 3322] (a) RESEARCH AND EXTENSION PROGRAM.—The Secretary may develop and implement a cooperative research and extension program to encourage the development, management, and production of important aquatic food species

within the several States and territories of the United States and to enhance further the safety of food products derived from the aquaculture industry, in accordance with the national aquaculture development plan, and revisions thereto, developed under the National Aquaculture Act of 1980.

(b) GRANTS.—The Secretary may make grants to—

- (1) land-grant and seagrant colleges and universities;
- (2) State agricultural experiment stations;
- (3) colleges, universities, and Federal laboratories having a demonstrable capacity to conduct aquacultural research, as determined by the Secretary; and
- (4) nonprofit private research institutions;

for research and extension to facilitate or expand promising advances in the production and marketing of aquacultural food species and products and to enhance further the safety and wholesomeness of those species and products, including the development of reliable supplies of seed stock and therapeutic compounds. Except in the case of Federal laboratories, no grant may be made under this subsection unless the State in which the grant recipient is located makes a matching grant (of which amount an in-kind contribution may not exceed 50 percent) to such recipient equal to the amount of the grant to be made under this subsection, and unless the grant is in implementation of the national aquaculture development plan, and revisions thereto, developed under the National Aquaculture Act of 1980.

(c) AQUACULTURE DEVELOPMENT PLANS.—The Secretary may assist States to formulate aquaculture development plans for the enhancement of the production and marketing of aquacultural species and products from such States and may make grants to States on a matching basis, as determined by the Secretary. The aggregate amount of the grants made to any one State under this subsection may not exceed \$50,000. The plans shall be consistent with the national aquaculture development plan, and revisions thereto, developed under the National Aquaculture Act of 1980.

(d) AQUACULTUREAL CENTERS.—To provide for aquacultural research, development, and demonstration projects having a national or regional application, the Secretary may establish in existing Federal facilities or in cooperation with any of the non-Federal entities specified in subsection (b) up to five aquacultural research, development, and demonstration centers in the United States for the performance of aquacultural research, extension work, and demonstration projects. Funds made available for the operation of such regional centers may be used for the rehabilitation of existing buildings or facilities to house such centers, but may not be used for the construction or acquisition of new buildings or facilities. To the extent practicable, the aquaculture research, development, and demonstration centers established under this subsection shall be geographically located so that they are representative of the regional aquaculture opportunities in the United States. To the extent practicable, the Secretary shall ensure that equitable efforts are made at these centers in addressing the research needs of those segments of the domestic aquaculture industry located within that region.

(e) LISTING OF LAWS ON AQUACULTURE.—The interagency aquaculture coordinating group established under section 6(a) of the National Aquaculture Act of 1980 (16 U.S.C. 2805(a)) shall, in consultation with appropriate Federal and State agencies, compile a listing of Federal and State laws, rules, and regulations materially affecting the production, processing, marketing, and transportation of aquaculturally produced commodities and the products thereof. The interagency aquaculture coordinating group shall make such listing available to the public not later than January 1, 1992, and shall update and revise such listing not later than January 1, 1996, to show such laws, rules, and regulations as in effect on that date.

(f) FISH DISEASE PROGRAM.—The Secretary shall implement, in consultation with the Joint Subcommittee on Aquaculture referred to in section 6 of the National Aquaculture Act of 1980 (16 U.S.C. 2805), a fish disease program to include the development of new diagnostic procedures for fish diseases, the determination of the effect of water environment on the development of the fish immune system, and the development of therapeutic, synthetic, or natural systems, for the control of fish diseases.

【Section 1476 repealed by section 302(a) of P.L. 105-185, 112 Stat. 563.】

AUTHORIZATION FOR APPROPRIATIONS

SEC. 1477. 【7 U.S.C. 3324】 There is authorized to be appropriated \$7,500,000 for each of the fiscal years 1991 through 2007. Funds appropriated under this section or section 1476 may not be used to acquire or construct a building.

Subtitle M—Rangeland Research

PURPOSE

SEC. 1478. 【7 U.S.C. 3331】 It is the purpose of this subtitle to promote the general welfare through improved productivity of the Nation's rangelands, which comprise 60 per centum of the land area of the United States. Most of these rangelands are unsuited for cultivation, but produce a great volume of forage that is inedible by humans but readily converted, through an energy efficient process, to high quality food protein by grazing animals. These native grazing lands are located throughout the United States and are important resources for major segments of the Nation's livestock industry. In addition to the many livestock producers directly dependent on rangelands, other segments of agriculture are indirectly dependent on range-fed livestock and on range-produced forage that can be substituted for grain in times of grain scarcity. Recent resource assessments indicate that forage production of rangeland can be increased at least 100 per centum through development and application of improved range management practices while simultaneously enhancing wildlife, watershed, recreational, and aesthetic values and reducing hazards of erosion and flooding.