Why does the Air Force own large acreages and why does it need a grazing and cropland management program? Actually the answer is relatively simple. The primary mission of the Air Force is to fly, fight and win. To do so effectively requires realistic training, and this training sometimes involves the delivery of live ordnance. To ensure that live ordnance training and other military operations do not disturb or destroy public and private property, the Air Force has established safety zones around its bases and ranges. Safety zones are required to buffer both physical and psychological impacts of Air Force operations. That is the primary reason the Air Force owns large tracts such as Avon Park Air Force Range (AFR) in Florida that contains 106,000 acres of flat land and marsh; Luke AFR in Arizona with a simulated surface-to-air missile target complex that includes 2.7 million acres of desert lands; and Eglin Air Force Base (AFB) in Florida which contains over 465,000 acres. While the primary mission of the Air Force is to fly and to fight, the secondary mission is to enhance the environment.

The Federal Land Policy and Management Act of 1976, and the Public Range Lands Improvement Act of 1978 include objectives relating to "multiple use and sustained yield." While these laws are not binding on the Department of Defense (DOD), they are used as guidelines for proper land management under Air Force control. In addition to performing its military mission, the Air Force leases over 250,000 acres annually for grazing and crop production. The total annual leasing value is over $2 million dollars.

Department of Defense Directive 4700.1 states that "The Department of Defense . . . will act responsibly and effectively. . . . to restore, improve, develop, and conserve . . . the renewable natural resources under military control." Also, ". . . conservation programs required . . . need not and shall not be mutually exclusive." This directive requires commanders to seek aid from federal, state, and local agencies to develop natural resource plans which could include grazing and cropland management, forest management, and fish and wildlife management. Because natural resource expertise is often lacking on the commander's staff, the commander can seek outside aid and assistance for development and completion of the management plans. The commander can also approve research projects which do not interfere with the primary Air Force mission.

Air Force Regulation 126-1 states that "Natural resources management programs . . . and the military mission need not, and must not be mutually exclusive;" and " . . . the defense mission does not reduce the Air Force's obligation to act as a responsible steward for these lands." Air Force Regulation 126-1 also includes "multiple use and sustained yield" as seen in public laws and the DOD directive. The Air Force expects to achieve "multiple use and sustained yield" of its land in three ways: first, by determining lands suitable for grazing and cropping; secondly, by preparing proper management plans; and thirdly, by cooperating with outside experts to insure that the recommendations made in the plans are technically sound. The Air Force expects to achieve first and foremost the conservation of natural resources. The Air Force is required to maintain or improve the condition of the land for which it is responsible. In some cases this could mean reduced land maintenance costs. For example, boundary fence construction and maintenance could be included in lease contracts.

Realistic training often times requires the delivery of live ordnance.

Grazing around explosive safety areas designed to provide safety zones for personnel.
By proper accomplishment of management plans, wildlife habitat may also be improved.

The Air Force expects to accomplish its objectives using Memoranda of Understanding with the U.S. Fish and Wildlife Service and the Soil Conservation Service. This way the Air Force can obtain technical assistance and advice needed to carry out natural resources programs.

The specifics of the Air Force Grazing and Cropland Management Program for Fiscal Year 1982 included participation by 36 ranges and bases, 17 of which have approved management plans and 19 in the review process.

Payment for agricultural outlease and service contracts is made in three ways: (1) cash is placed in the Air Force Grazing and Cropland Management Fund; and (2) maintenance and/or improvements to the leased land; or (3) combinations of both cash and maintenance-improvements. In 1981 the Air Force leased 186,000 acres for $0.6 million worth of services-improvements and $0.3 million in cash, totaling $0.9 million. In 1982 this amount increased to $1.45 million in services-improvements and $0.5 million in cash totaling $1.95 million.

Under present law the Air Force is authorized to retain and spend monies collected for grazing and cropland activities to cover administrative costs of leasing and financing of multiple land-use management programs. This change revolutionized management programs on Air Force lands because in the past, natural resources programs were funded only from military operational funds. As a result, many important natural resources programs which would promote optimal use of military lands were not undertaken. The present law provides the incentive to lease out more land improvements—

as long as the improvements are annotated in an approved management plan. Newly constructed improvements, with the lessee maintaining them at his expense, increase the value of the property to the lessee and the Air Force.

Grazing and cropland improvements are categorized in three ways: structural, nonstructural, and developmental. Structural improvements most often needed are fencing, both boundary and separation of pastures. Cattleguards are often a very important improvement, especially when vehicul-
cepts and objectives. GAO's findings concerning grazing and cropland outleases were: (1) plans were sometime nonexistent or inadequate at many bases; (2) there is a lack of management emphasis from DOD down to the base level; and (3) DOD is not maximizing the benefits of the various Services leasing programs. Their recommendations are summarized as follows: (1) plans should be developed on a continuing basis, (2) there should be periodic reviews to assess leasing value, (3) management plans should require a maximum leasing of military property, and (4) DOD should investigate the possibility of establishing a grazing-cropland management fund similar to the Air Force forestry fund. The current Air Force regulation and recent change in public law greatly improves the Air Force's ability to comply with all four GAO recommendations.

In summary, Air Force installations are required to participate in proper and effective land management practices. Grazing and cropland management plans are required by Air Force Regulation 126-1 if land is available for such use and the military mission does not specifically preclude this use. The results we expect are conservation and/or improvement of the natural resources; improved value of Air Force property; and reduced maintenance costs. We expect to accomplish proper land management with the help of the USDA-Soil Conservation Service, USDI-Fish and Wildlife Service, state universities and state Agricultural Cooperative Extension Services.

It is our desire that this introduction to the Air Force Grazing and Cropland Management Program will help you, the reader, understand Air Force goals, objectives, and requirements as they pertain to land under control of the Air Force.

"Rincon" Fourwing Saltbush—Proven for Better Forage and Reclamation

E. Durant McArthur, Sam E. Stranathan, and Gary L. Noller

A superior strain of an Intermountain West shrub—a plant used for wildlife and livestock range and disturbed land reclamation programs—was recently released to the commercial market, climaxing 25 years of cooperative research by State and Federal agencies.

The improved strain, "Rincon" fourwing saltbush (Atriplex canescens [Pursh] Nutt.), was selected for its vigorous upright growth, sustained forage production, nutritive value, palatability, wide adaptation, and tendency to be evergreen. "Rincon", which is well adapted to much of the Intermountain area (see map), was developed by the Agricultural Experiment Stations of Colorado State University and Utah State University, the Utah State Division of Wildlife Resources, the USDA Forest Service's Intermountain Forest and Range Experiment Station, the USDA Soil Conservation Service, and the Upper Colorado Environmental Plant Center.

Description

"Rincon" fourwing saltbush is a facultative evergreen shrub, woody throughout, 3 to 6 feet tall, much branched, often globular or dome shaped. It is often more leafy and full canopied than other sources of fourwing saltbush (McArthur et al. 1983). Its three gender states are constant male, constant female, and labile. The latter state may be male, female, or bisexual depending on environmental conditions (McArthur and Freeman 1982). The male bushes produce flowers on spikes, and female bushes produce large quantities of four winged utricles on many branches (see photos). Seeded "Rincon" populations have a slightly biased (approximately 55%) female sex ratio, fewer (approximately 35%) male plants, and the balance (approximately 10%) bisexual in any particular flowering season.

Origin, Development, and Use

"Rincon" fourwing saltbush originated when, in fall of 1957, Paul E. Hansen and Homer D. Stapley collected seed at Rincon Blanco on the Carson National Forest, about 3 miles from Canjilon, Rio Arriba County, New Mexico. The natural stand at Rincon Blanco was recollected in 1960. The site is at 7,800 feet elevation and has a mean annual temperature of about 45°F. Winter temperatures regularly get as low as -15°F, with summer high temperatures 90°F or higher.

"Rincon" was selected from a half-sib population of some 700 plants based on sustained annual biomass production, an erect uniform leafy growth habit, and a tendency toward evergreenness or early spring greenup. In common with other fourwing saltbushes, its leaves, stems, and utricles provide browse in all seasons for livestock and wildlife. Crude protein content measured 17.9% in November and