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Forest  
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Route To:

Subject: Grassland Reserve Program

To: Easement Division  
Natural Resources Conservation Service  
P. O. Box 2890  
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The U. S. Forest Service in Hawaii opposes use of the Grassland Reserve Program, (GRP), to fund permanent easements and long-term rental agreements of anthropogenic grasslands in the State of Hawaii for the following reasons:

1. Although the GRP appears to be a well thought out program for the U. S. mainland, it is inappropriate in the State of Hawaii where there are no extensive naturally evolved grasslands. Although “western” cattlemen have converted hundreds of thousands of acres of Hawaiian forests to grasslands for the purpose of grazing, this has been to the detriment of the extent and biodiversity of native forests. Conversion of hundreds of thousands of acres of forests to grasslands has played a major role in the decline of native species in Hawaii.
2. Many of these converted grasslands still contain extensive seed banks, and scattered remnant trees from the native Acacia koa forests. Often the simple act of disking and fencing out cattle can return these pasture lands to koa forests. As Acacia koa has become an increasingly popular wood, due to its great beauty and workability, its value has sky rocketed. Today, Acacia koa is the most valuable wood per board foot grown in the U. S., retailing as high as \$40 per board foot. Even with Hawaii’s regressive tax system that favors grazing over forestry, some land owners are beginning to think of shifting some their grasslands back to the native koa forests. Institution of the GPR would work to bring the balance back to keeping the land in pasture as opposed to forestry. Unfortunately the viability of the koa seed banks is declining over time and the few isolated trees in the pastures are slowly dying out. As this genetic material vanishes, the conversion of these koa forests to exotic grasslands becomes permanent. Our biggest concern with the program, as presently being offered to Hawaii, is its potential negative impacts in the mid elevation grasslands that were formerly koa forests. There may be some lower elevation and higher elevation situations, where the program could be considered a positive influence.



3. The most critical activity and resource concern for land management in the State of Hawaii is watershed management. Grasslands, compared to forest lands do a poor job in the basic watershed functions that are so vital to the well being of Hawaiian ecosystems. Hawaiian island ecosystems have evolved with the forests shading the streams, which reduces thermal absorption, and results in cooler water entering the marine systems. In addition, the forests intercept the rainfall at numerous levels, including with leaves, branches, trunks, roots, and under story, which impedes the waters progress downstream to the reefs, resulting in a more stable hydrologic cycle, (i. e. smaller peak flows). Watersheds that are primarily grass covered, function in an entirely different manner. Unfortunately, when forests are converted to pastures, (or kept in pasture, instead of reverting back to forests as with the GPR), these forest processes that evolved over millions of years no longer function, resulting in negative impacts on the downstream systems, and particularly to the reefs.
4. Pasture lands in the State of Hawaii that would be eligible for the GRP include a wide variety of grass species – unfortunately, the vast majority are exotic. Depending on your definition of “invasive”, many of the species that would be protected and subsidized under the GRP are classified as “pest” or invasive under the Weed Risk Assessment system instituted in the State of Hawaii under the direction of Kurt Daehler at the University of Hawaii, (see web site at [www.Botany.hawaii.edu/faculty/daehler/wra](http://www.Botany.hawaii.edu/faculty/daehler/wra)). The U. S. Executive Order 13112 of February 3, 1999, “Invasive Species”, directs that Federal agencies “not authorize, fund, or carry out actions that it believes are likely to cause or promote the introduction or spread of invasive species in the United States or elsewhere unless, pursuant to guidelines that it has prescribed, the agency has determined and made public its determination that the benefits of such actions clearly outweigh the potential harm . . .”. It would appear there is a conflict with implementing the GRP in Hawaii with Executive Order 13112.
5. Given the specific situation in Hawaii, it is questionable whether an Environmental Assessment is the appropriate environmental documentation for this action. In light of the fact that the GRP could lock up significant acreages of former forests in grassland until the koa forest seed bank is no longer viable, this should be considered an irreversible and irretrievable commitment of resources, and should require an Environmental Impact Statement.

As I have mentioned above, GRP is probably a good fit for most of the U. S. mainland, but it could be highly detrimental to Hawaiian ecosystems. If your agency believes that in spite of the poor fit of GPR in Hawaii, that every state in the nation must have a program, the Forest Service recommends as a minimum, that either, (a) the program guidelines allow the unrestricted restoration of native trees as well as native shrubs and forbs under GPR easements and rentals, with no penalty or repayment required from the

landowner, or (b) pasture lands that were once and could potentially be restored to native forest should not be enrolled in this program with permanent easements or long term rental agreements.

Sincerely,

Fred Bell  
Pacific Islands Forester