

ABSTRACT: Two-year survival rates for ponderosa pine seedlings grown and planted by a contractor were higher than rates for seedlings grown and planted by the Government at nearby sites in 4 contract years. A better partnership arrangement between contractors and management agencies, featuring performance and bonus payments, should result in increased seedling survival. A Government-private industry task force should be formed to discuss the proposal.

INTRODUCTION

For 6 years Colo-Hydro Inc. contracted with the Bureau of Indian Affairs to "Grow & Plant" ponderosa pine seedlings to reforest a burned area near Ruidoso, NM.

Between 300,000 and 400,000 containerized seedlings were grown and planted each year. The Government supplied the seed, the seedling specifications, and the planting specifications. The contractor grew the seedlings and delivered them to the site and planted them in the forest.

The payment schedule was as follows: 30 percent when crop was planted in greenhouse; 30 percent when trees were delivered; 40 percent when trees were planted in ground.

The Government inspected the seedlings prior to each progress payment and inspected the planting on a daily basis. The total payment for the contract was based solely upon the number of trees satisfactorily spaced and planted in the forest.

At the same time the Government produced seedlings in its own facility and managed its own planting contracts on adjacent tracts. The 2-year survival rates for the 1978-81 plantings were consistently higher than the plantings made by the Government. Survival data for the 1982 and 1983 plantings are not yet available.

This is not intended to indicate that private individuals are better managers than the Government representatives. Instead, it reflects the fact that contractors, and specifically small

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businesses, have a great deal more flexibility than do Government contracting officers.

PRIVATE ADVANTAGES

The problem is to motivate people to do good work. Here the private manager has much more freedom than his Government counterpart.

First, he does not have to take the low bidder. He can select the bidder who'll make him the best profit and who'll minimize the prospects of default. Second, he can give longer term work assurance. If a contractor feels that a superior job done now will help to get him the job next time, he will be more motivated to do a good job now.

Third, he has more freedom to hire and to fire personnel. Under the "Plant & Grow" contract the seedlings were taken to the forest in their trays. These trays included about 10 percent empties and culls. It became obvious that some of the planters were planting the culls. A retired man was engaged on a part time basis to account for the seedlings taken out and to count the culls coming back. By the second day he was able to tell who were planting culls. The cost of this extra help was very minimal, and there were no delays or complications or special forms to fill out to hire him and lay him off.

Fourth, the private manager has more flexibility to respond to situations that arise on the job. In one instance, too many seedlings were being planted unsatisfactorily in spite of the fact that the planting crews had to pay for the seedlings that were poorly planted. The manager offered a \$100 daily cash bonus to the crew that had the lowest percentage of unsatisfactorily planted trees. This was passed out in cash every night. Within a few days the individual planters were watching to see who in their crew was doing the bad planting. With the peer pressure and the increased awareness the problem went away. The extra flexibility available to the private manager is an asset that can be used to the credit of the Government.

A BETTER COMBINATION

Might it be possible to develop a better combination of Government and industry participation which will improve reforestation success?

How can we further tap the flexibility and the advantages available to the private sector to the best interest of the Government?

The ultimate goal is to have trees surviving in the forest.

Any concept designed to achieve a more effective Government and industry partnership to achieve this goal must consider many things.

1. What is the effect on the contracting officer who must protect the Government interest and work within certain restraints?

2. What is the effect on Timber Management Officers who want to assure quality work on a timely basis in order to take advantage of site preparation and moisture conditions?

3. What is the effect on the contractor? He must not be asked to take risks over which he has no control (weather, soils, seed quality, site preparation, etc.).

4. Any such concept must address the problem of progress payments. The ultimate measure of performance is the number of trees surviving in the forest. The extent of survival cannot be evaluated until 1 to 2 years after the planting. Therefore, progress payments must be made to the contractor without further increasing the risk to the Government.

REWARDS MOTIVATE

It seems to be clear that in our society a reward for above normal performance is a much greater motivator than a penalty for below normal performance.

One possible scenario for improving motivation might be as follows. Let us assume for the purpose of conveying an idea that:

Price of seedlings	=20c
Price of planting	=30c
Total cost of operations	=50c
Now let us assume that the	
normal survival	=66 pct.
Then the cost per live tree	=75c

Now let us suppose that the final payment on the contract is 75c per tree surviving after 1 or 2 years. To cover the contractor's needs, progress payments are made for seedlings when they are finished, and for the planting when it is completed.

To protect the Government, these progress payments could be based upon the numbers of seedlings meeting, the specifications and the number planted and spaced according to specification. Thus the risk to the Government would not be any greater than under the current practices.

The contractor on the other hand would receive payment for growing and for planting as in the past. In addition he would receive a bonus for survival in excess of the normal. If he can increase survival by 10 percent he will increase his income by 10 percent and increase his profit by significantly more than 10 percent. Most small business entrepreneurs would respond to

this with a special and imaginative effort to achieve better survival.

At the same time the Government will still be paying 75c per tree.

TASK FORCE NEEDED

Now it is recognized that the above example leaves some questions unanswered. However, there is a clear view of areas to explore. A fruitful discussion of these areas could best be achieved by a small group made up of members of the Government and members of the private sector.

Toward this end it is proposed that a task force be formed to explore the possibilities for a new approach designed to direct motivation toward ultimate seedling survival.