



NRCS Pacific Islands Area – Planning for Forestry Plantings & Seedling Acquisition June, 2015

Challenge: NRCS PIA forestry cooperators sometimes have difficulty obtaining containerized plant materials when trying to implement a planned forestry planting practice.

Solution: Careful planning will assist in implementing forestry planting plans to ensure that cooperators can acquire the plant materials needed to complete planting practices according to standards, specifications and on time.

Below are considerations & step-by-step guidance that NRCS & HACD planners (hereafter, “Planners”) are recommended to follow to help their cooperators & nursery suppliers achieve success in reforestation projects.

A. Planning for tree and shrub planting projects:

Conservation Plans and associated schedules of operations must incorporate adequate lead times for acquiring needed plant materials while simultaneously accounting for site preparation time requirements and the local planting (rainy) season.

- Pioneer and other fast-growing species (e.g. koa, mamaki, aalii, Honduran mahogany, eucalyptus) take up to 4 months to prepare in nurseries.
- Slow growing species (e.g. ohia, lama, mamane, most native overstory and understory species, palms, tree ferns, cycads, fruit/orchard trees) may take 12-18 months to prepare in nurseries. Cooperators should be advised that NRCS financial assistance payments may be far lower than the cost for these more “difficult species.”
- These are typical or approximate guidelines, lead times will vary by species.

For planned units that will be predominantly or completely open after site preparation activities are completed, Planners should focus their consultations with cooperators on basic reforestation efforts. This could represent the final forest target composition if it’s simple (for example, an acacia or mahogany plantation), or merely a first phase planting that will be supplemented with additional plantings and species 3-15 years later. Planting plans should:

- Include species that are readily available, relatively inexpensive, i.e. “pioneer” & other fast growing species.
- Have simple species composition - between 1-8 total tree and associated shrub species is a good target and is what current NRCS financial assistance rates are designed to incentivize.

For planned units that already have moderately- or well-established canopy layers, where the Wildlife land use modifier is used or for agroforestry projects, more plant diversity may be needed (or required per Biology Technical Note 23 or Forestry/Agroforestry Technical Note No. 11). Advise cooperators that associated planting plans may involve complicated logistics due to relatively high proportions of species that will be:

- Scarce due to challenges in obtaining viable seeds or cuttings. Delays due to seasonal seed production and lack of local availability may be experienced.
- Slower growing and therefore require nursery lead times of as much as 12-18 months.
- Delivered on multiple occasions due to variation in seed availability and growth rates by species.
- Larger planting stock / pot sizes.
- More costly, resulting in out-of-pocket costs higher than NRCS Financial Assistance rates.

B. Planning steps to a successful forestry planting project:

Note: Steps 1, 2, 3 and 12 represent basic NRCS technical planning and are included to show where supplemental steps are intended to “fit in” for forestry planting planning.

1. Identify Cooperator objectives.
2. Identify Resource Concerns/Problems for the target land area.
3. Conduct all required and supporting inventory work.
4. Discuss with cooperators that they will likely have to:
 - a. Work carefully with one or more nurseries to plan and order required planting stock.
 - b. Pay for plant materials in full on their own, and get paid the flat rate financial assistance payment from NRCS after successful planting has been certified. Financial assistance payments can cover part to all of the associated costs depending on various factors.
5. Use the NRCS PIA Vegetative Guide to prepare a preliminary list of species for the planned unit. Cooperators and nurseries should be advised that these lists are a subset of plants that are likely to be suited to a particular site. Choices are to be made from the list based on cooperator objectives, availability, required lead time and cost. Species for preliminary and final plant lists should be drawn directly from the PIA Vegetative Guide list as much as possible, variances from these lists are discouraged.
6. Develop an initial planting plan including species recommendations and arrangements of trees and/or shrubs & vines needed for the planned acreage.
7. Calculate approximate plant quantities needed by species.
8. Cooperators should contact nurseries to determine which ones currently have the ability and capacity to supply the species and quantities in the planting plan. Important considerations for these inquiries include:
 - a. More than one nursery may be needed to address the planting plan.
 - b. Make sure each nursery understands that the cooperator is not ordering yet, but just inquiring to find out what is possible.
 - c. Discuss which principal species and quantities a given nursery has produced in the last few years. Do they have demonstrated ability in handling the type of order needs a given project has?
 - d. What pest control and sanitation measures does the nursery take to address parasites, diseases and invasive species (little fire ants, coqui frogs, etc.).
 - e. Discuss what lead time is needed by species of interest individually and/or by species groups to match the planned planting dates.
 - f. Where will the nursery source the seed or planting stock to fulfill the order? It’s preferable to get planting stock from your own island and/or region, but it’s ok to order from other islands too. Just be very mindful of sanitation and invasive species issues.

- g. Discuss desired seedling specifications such as required age, height & vigor at target delivery date.
 - h. Ask nurseries about their order terms and whether a deposit required.
9. Based on consultations with cooperators, Planners should adjust and finalize the Jobsheet and planting plan according to what the nurseries can supply. Planners should hand **both the Jobsheet and the associated practice certification sheet** to Cooperators and explain:
- a. The technical guidelines and specifications laid out in the Jobsheet and associated requirements in the practice certification form.
 - b. That if installed work that does not conform to all requirements of the Jobsheet and certification form, they will not be certified and receive financial assistance for adequate completion of the conservation practice.
10. Pencil out required time frames:
- a. If site preparation work is required to support the planting practice, what methods, costs and anticipated number of days or months needed to complete the work?
 - i. Identify any site preparation restrictions that may apply to a given project site due to seasonal wildlife considerations or the presence of T&E species.
 - ii. Tree and shrub planting work should be completed 2 weeks to 6 months after site preparation work is completed, with a preference for the shortest time period possible.
 - b. Identify the beginning and end of the rainy season for your site.
 - c. Can the time periods required for **step 8e above** be accommodated before the beginning of the next rainy season? If not planting may need to be deferred:
 - i. To a year after the next planting season.
 - ii. In stages over two or more planting seasons.
11. Cooperator must evaluate proposed costs, potential reimbursements (including prospective dates of NRCS reimbursement), time frames & workloads to determine if they wish to proceed.
12. Submit projects for prospective NRCS contracting – cooperators and nurseries are on standby.
13. If successfully contracted, cooperators place orders with nurseries in a timely manner.
- a. Within order paperwork, ensure desired seedling specifications such as required age, height & vigor at target delivery date are acknowledged in writing. Documentation of orders will be important if there are unanticipated delays in delivery and cooperators contact Planners with requests to modify or extend their contract.
 - b. At this time cooperators should also discuss and agree whether seedlings will “hardened off” per guidance in PIA Jobsheets in the nursery or transferred to the planting location for this phase of seedling preparation.

C. Nursery sources:

- PIA Plant Materials Technical Note 6 (PM-6) is the list of potential nurseries and suppliers that Planners should provide to cooperators.
- Periodic data compiled by NRCS to provide current information on seedling stock availability.

D. Potential challenges:

- From Nursery suppliers' perspective:
 - Some cooperators don't want to pay a deposit for seedling orders.
 - Cooperators still waiting to be contracted will not order, i.e. cooperators are talking to them about interests/needs before contracting.
 - Cooperators want small plants at a cheap price.
 - Cooperators walk in late and expect orders to be filled quickly.
 - Lack of knowledge of some cooperators.
 - Some nursery growers are consultants and perceive NRCS as a competitor.
- From the cooperator's perspective:
 - Some nurseries may take orders but not act on them in a timely manner or not at all (lack of seed, other reasons).
 - Paying a deposit to nursery producers for plant orders may encourage nurseries to stay on schedule.