

## Planting Procedures - bitterbrush and pine

### General

Plant on a bitterbrush site.

Plant as soon as possible after snow leaves the ground while soil moisture is high.

Plant on an unprepared site.

Plant on an area grazed moderately or heavily by livestock (cattle preferably) or by big game (deer).

Plant all seeds about 3/4 inch deep.

### Hand planting

Number of plots	One
Type of plot	Line transect
Length of plot	400 feet (continuous or in segments)
Species to be planted	Bitterbrush and ponderosa pine

Stretch a tape on the ground to establish the transect.

Stake the ends of the transect and intermediate points if needed.

Cut a 1-inch deep furrow along side the tape to receive the seed.

~~Plant bitterbrush and pine alternately in spots at 2-foot intervals along the transect -- bitterbrush at the 2, 6, 10, etc. feet points and pine at the 4, 8, 12, etc. feet points.~~

Plant two seeds of each species in each spot.

Put soil back into the furrow and pack firmly over the seeds.

### Drill planting

Number of plots	One (or more)
Type of plot	Belt transect
Size of plot	One drill width wide and as long as seed lasts
Species to be planted	Bitterbrush
Rate of planting	One-fourth pound per acre

Drill across as many different sites as possible.

Press soil firmly over the seeds.

Mark the center line and ends of the transect with stakes.

# Hand Planting - Bitterbrush (Pt) & Ponderosa Pine (Pp)

State	Locality	Agency	Plot Name						
Planting date _____		Personnel _____							
Number of seeds per spot _____									
Distance to planting spot (ft)	Species planted	Exam 1		Exam 2		Exam 3		Exam 4	
		Date _____	Remarks	Date _____	Remarks	Date _____	Remarks	Date _____	Remarks
		No of plants ✓ Gr LV		No of living plants		No of living plants		No of living plants	
0									
2	Pt								
4	Pine								
6	Pt								
8	Pine								
0	Pt								
2	Pine								
4	Pt								
6	Pine								
8	Pt								
0	Pine								
2	Pt								
4	Pine								
6	Pt								
8	Pine								
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2	Pine								
4	Pt								
6	Pine								
8	Pt								
0	Pine								
2	Pt								
4	Pine								
6	Pt								
8	Pine								
0	Pt								
Personnel by exams →									
✓ Gr = germinated				✓ Explain causes of mortality etc					
LV = living				Likely causes weather, grazing					
				rodents insects, plant competition					

Hormay pine and bitterbrush plantings

Spring 1972

Planting agency \_\_\_\_\_

Name of planting area \_\_\_\_\_ Transect No. \_\_\_\_\_

Date of planting \_\_\_\_\_

Date of this record (last examination) \_\_\_\_\_

Examiners \_\_\_\_\_

Spring record, fall record (Circle one)

Vegetative type of planting site \_\_\_\_\_

Soil moisture at seed depth at planting time Wet, Moist, Dry (Circle one)

Germination and survival

Seed spots planted	Seed spots germinated	Seed spots surviving
Number	Number	Number

Species

Bitterbrush  
Ponderosa pine

Was there evidence of rodents R, or birds B, mining out seeds?

Bitterbrush	Yes	R	B	No	(Circle appropriate)
Ponderosa pine	Yes	R	B	No	(Circle appropriate)

Probable causes of seedling mortality if any (Check under appropriate heading)

	Weather	Rodents	Insects	Big game	Livestock
Bitterbrush	:	:	:	:	:
Ponderosa pine	:	:	:	:	: