

Auburn University Southern Forest Nursery Management Cooperative

2008 Forest Nursery Management
Shortcourse



Pine Seed

Handling And Sowing

Sources for Pine Seed

- International Forest Company
- Southern Seed Company
- Louisiana Forest Seed Company
- Creekside Consultants
- Aroborgen
- Rayonier











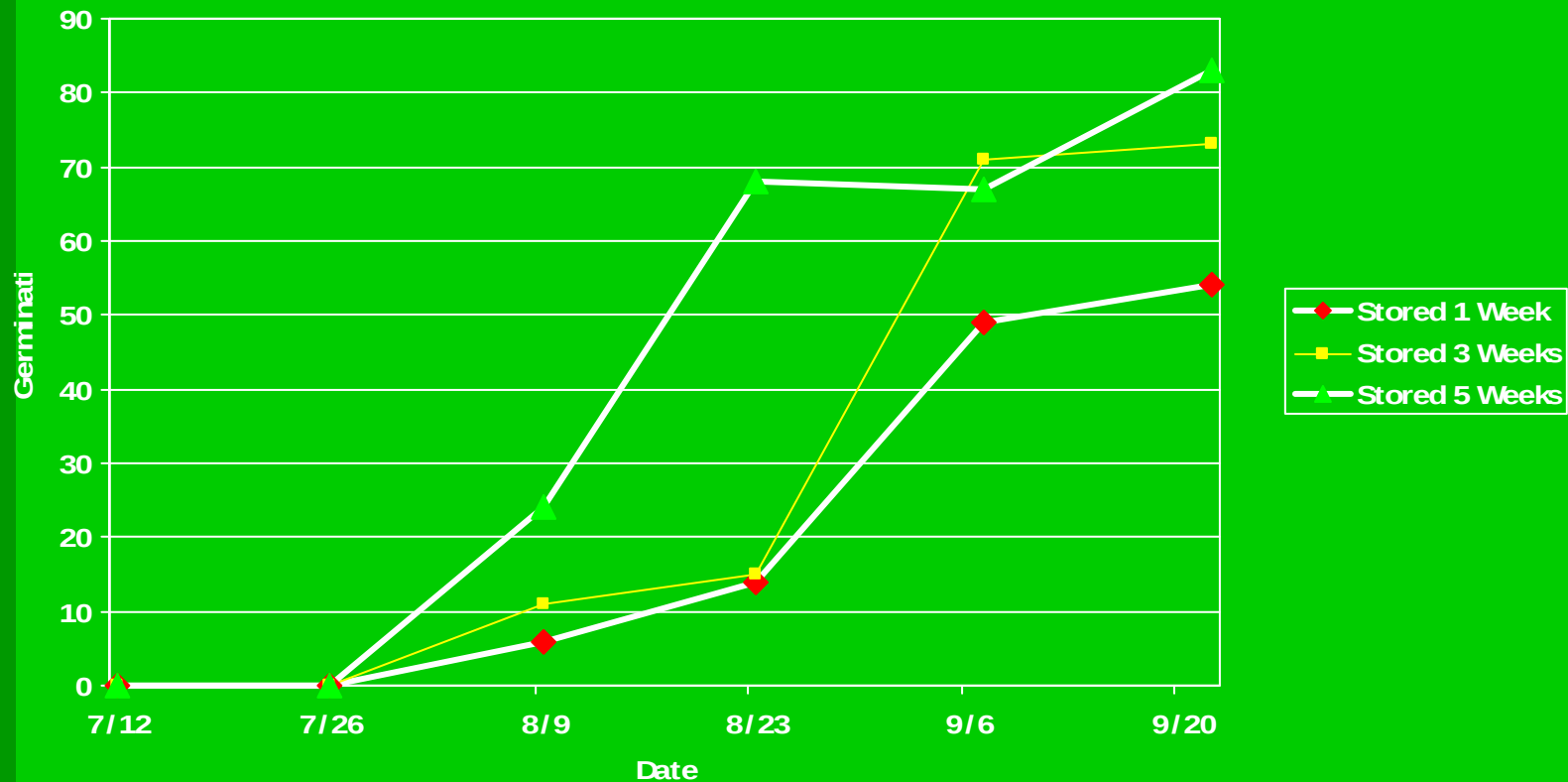






Slash Germination

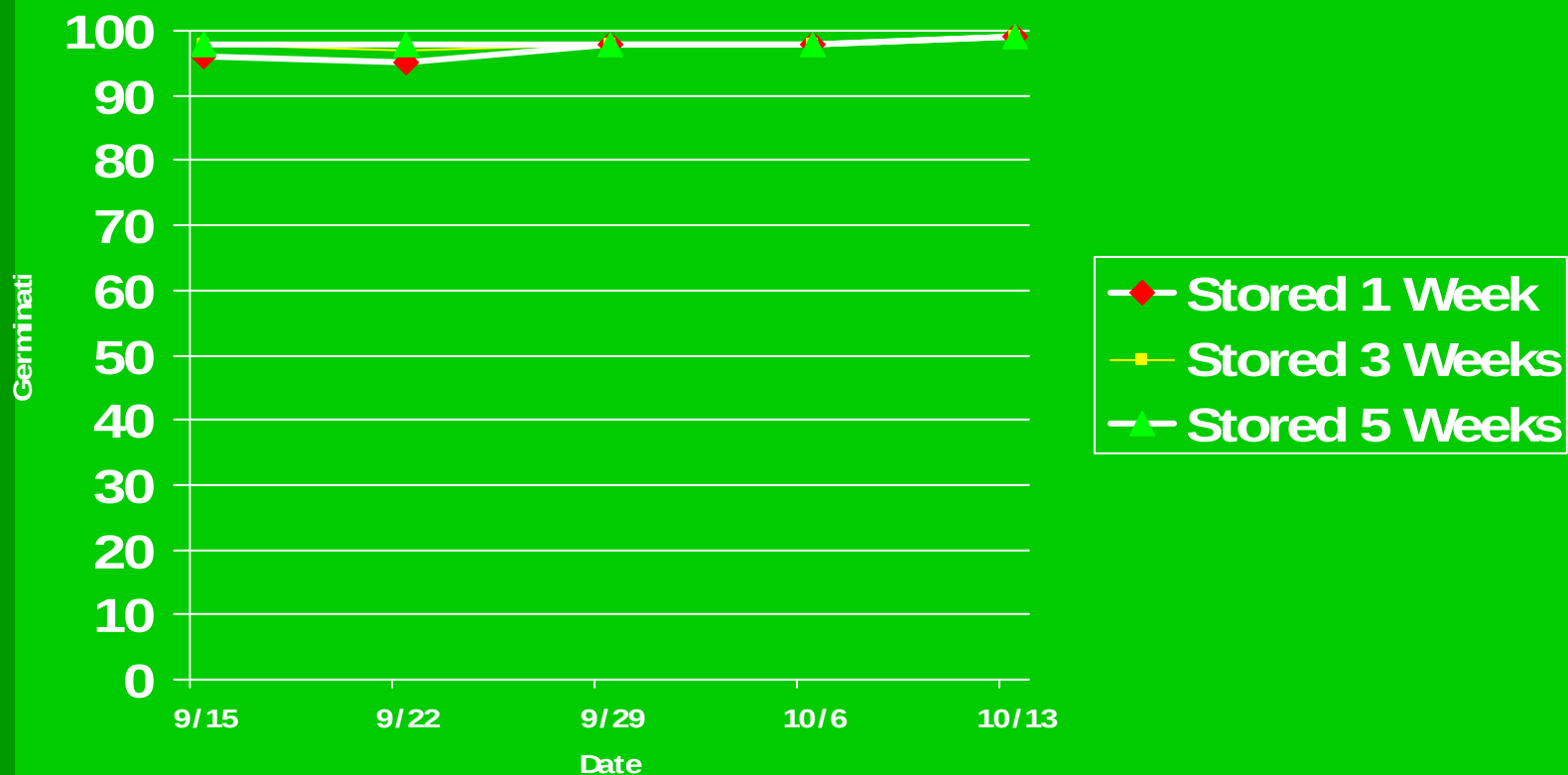
Based on Date Collected and Cone Storage



Barnett 1978

Loblolly Germination

Based on Date Collected and Cone Storage















Typical Seed per Pound

- Loblolly - 11,300 to 26,200
Average - 17,421
- Slash - 7,800 to 18,300
Average - 11,397
- Longleaf - 3,700 to 6,300
Average - 4,256

Sowing Plan

SOWING PLAN 05-06												
Seedlot	Size	Amount Pounds	Germ	Seed/lb	Nursery Survival	Density	Estimated Seedlings	Seed/ 1 ft Bed	Computer Setting	Linear ft of Bed	Bayleton Needed	Genetics Rank
Loblolly												
6004	mix	13.2	92.00	16,600	0.83	21	167,320	110	6.9	1,992	0.53	1
6057	B	42.4	96.00	16,600	0.83	21	560,820	105	6.6	6,676	1.70	4
6061	B	9.3	98.00	16,200	0.83	21	122,547	103	6.5	1,459	0.37	3
7506	A	50.0	95.00	13,400	0.83	21	528,295	107	6.7	6,289	2.00	2
7506	mix	231.1	96.00	20,900	0.83	21	3,848,536	105	6.6	45,816	9.24	2
7712	C	28.4	96.00	17,600	0.83	21	398,273	105	6.6	4,741	1.14	5
Total Loblolly		374.4					5,625,790			66,974	14.98	
						Request	5,378,662					
SLASH												
3019	A	23.6	93.00	9,500	0.79	21	164,720	114	7.1	1,961	0.94	1
3055	B	15.1	97.00	13,000	0.79	21	150,425	110	6.9	1,791	0.60	2
3090	A	51.4	94.00	8,900	0.79	21	339,710	113	7.1	4,044	2.06	3
Total Slash		90.1					654,854			7,796	3.60	
						Request	621,338					
TOTAL												
		464.5					6,280,644			74,770	18.58	











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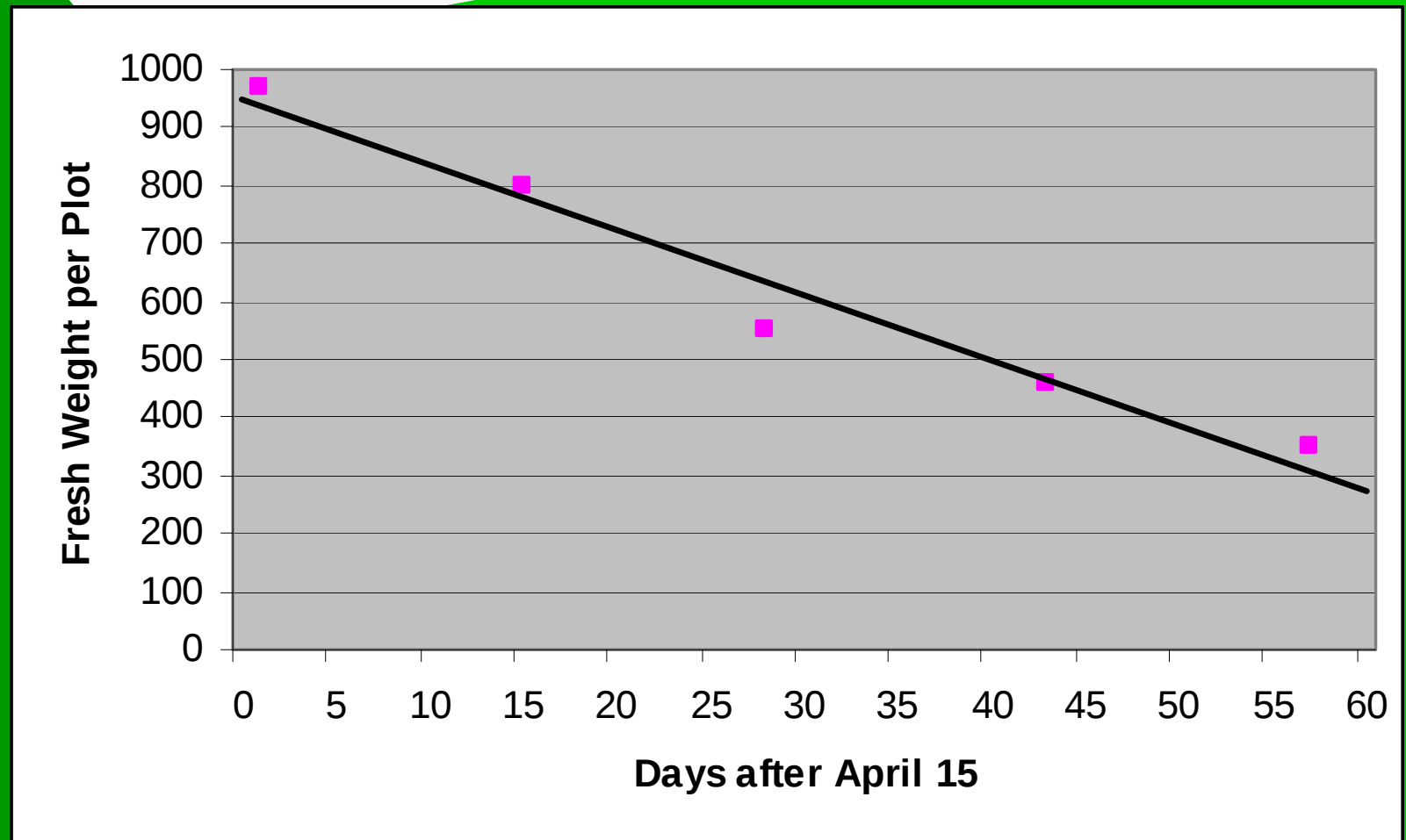
FIGURE 23.—Bateman seeding trough for sowing drills crosswise of the nursery bed. Pushing the handles together opens the bottom of the trough and drops the seed. Six-inch wooden guides projecting from the far side space drills correctly.







Effects of Sowing Date on Fresh-Weight Production of Loblolly Pine Seedlings





Single Family Germination

1993 Season - Slash seed lots

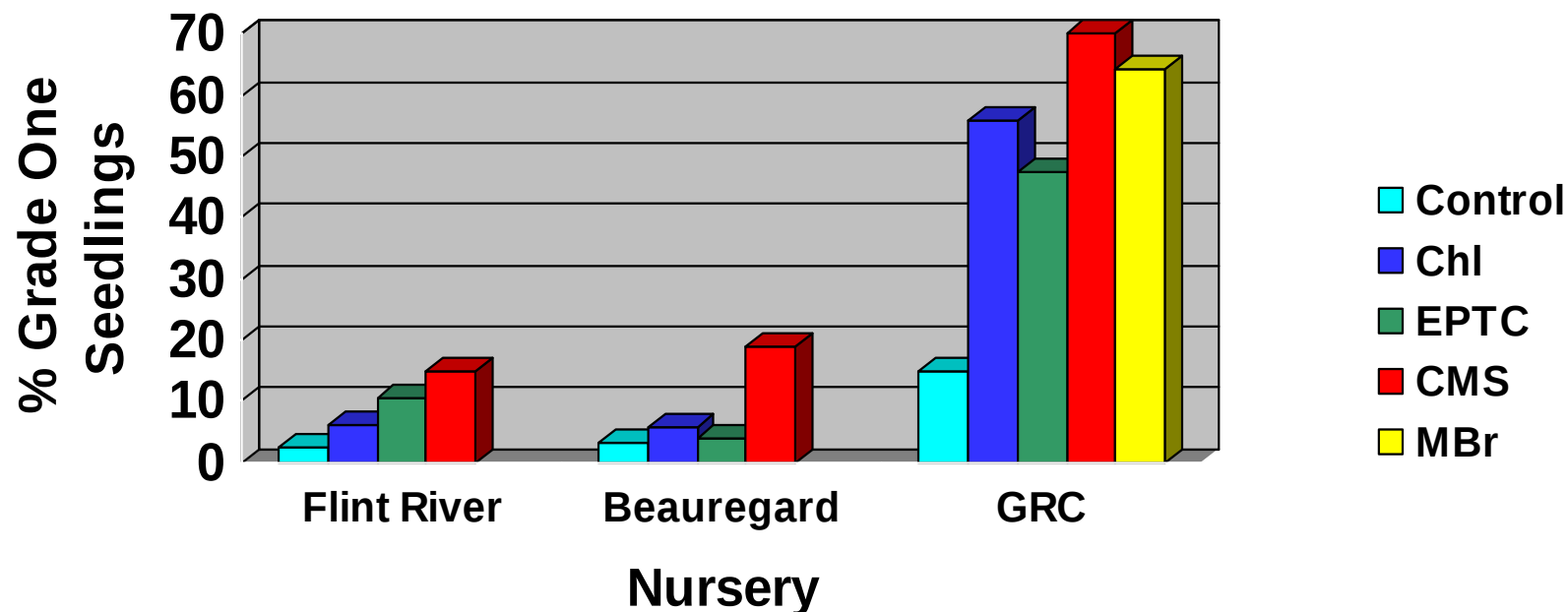


Seedbed Sowing Density

- According to Wakeley optimum target density is 30 to 45 seedlings/ sq. ft (1954).
- Dr. Jack May in the Southern Pine Nursery Handbook notes that most densities in 1984 were 24 to 30.
- Mexal notes that the biological optimum appears to be approx. 19.
- Some nurseries have pushed the density levels down to as low as 10 seedlings/ sq. ft.

Effects of Sowing Density on Seedling Size

1998 AUSFNMC Fumigation Study



Seedbed Density effect on Nursery Cost

