Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.

1.96
Ad6Tp

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
WASHINGTON, D. C.
H. H. BENNETT, CHIEF

SEED PROPAGATION OF TREES, SHRUBS, AND FORBS
FOR CONSERVATION PLANTING

U. S. DEPT. OF AGRICULTURE
NATIONAL AGRICULTURAL LIBRARY

JUN 5 - 1968

CURRENT SERIAL RECORDS

Prepared for the Technicians of the
Soil Conservation Service

SOIL-TP-17

September - 1968

236C14

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
Washington, D. C.
H. H. Bennett, Chief

USDA, National Agricultural Library
NAL Bldg
10301 Baltimore Blvd
Beltsville, MD 20705-2351

SEED PROPAGATION OF TREES, SHRUBS, AND FORBS FOR CONSERVATION PLANTING

A compilation of information on number of seeds per pound,
germination percentages, recommended handling,
and yield of plants

Assembled by Charles F. Swingle, Horticulturist, from the
literature and from unpublished information,
especially that supplied by technicians of
the Nursery Division, Soil Conservation
Service

Prepared for the technicians of the
Soil Conservation Service

SCS-TP-27
September - 1939

(3959)

KEY TO REFERENCES (Con't.)

- (16) Soil Conservation Service Data, Region 7, 1935 Seed Crop.
- (17) " " " " " 8, 1935 " "
- (18) " " " " " 9, 1935 " "
- (19) " " " " " 1, 1936 " "
- (20) " " " " " 5, 1936 " "
- (21) " " " " " 10, 1936 " "
- (22) " " " " " 11, 1936 " "
- (23) Darrow & Sherwood, Amer. Soc. Hort. Sci. Proc. 1931: 194-199.
- (24) Pettis, C. R. 1909 U. S. Forest Service Bull. 76.
- (25) Sudworth, S. E. 1900. U. S. Forest Service Bull. 29.
- (26) Yerkes, G. E. 1932. Propagation of Trees and Shrubs.
U. S. Dept. Agr. Farmers Bull. 1567, and additional information.
- (27) Steinbauer and Steinbauer, Amer. Soc. Hort. Sci. Proc. 1931,
26: 441-443.
- (28) Soil Conservation Service Data, Region 8, 1936 Seed Crop.
- (29) Yerkes, G. E., Proc. Ninth Int. Hort. Congress, London, 83-91, 1930.
- (30) Erosion Control Nursery Data. Bureau of Plant Industry,
1933 Seed Crop. Ames, Ia.
- (31) Amadon, A. F., Albany, N. Y. unpublished data.
- (32) Brown, Otto, Erosion Control Nurseries and Soil Conservation
Service Unpublished Data.
- (33) Soil Conservation Service Data, Region 4, 1936 Seed Crop.
- (34) Swingle, Charles F., Natl. Nurseryman 33: 197-200, 1925.
- (35) Soil Conservation Service Data, Region 6, 1936 Seed Crop.
- (36) " " " " " 5, 1937 " "

KEY TO REFERENCES

- (1) Toumey, J. W. and C. F. Korstian
Seeding and Planting in the Practice of Forestry, 2nd Ed. 1931.
- (2) Propagation of Game Food and Cover Plants of the Lake States.
Lake State Forest Exp. Station. Mimeo. St. Paul, Minn. October 1935.
- (3) Seed and Nursery Practice. U. S. Forest Service, Shelterbelt Project.
Mimeo. Lincoln, Nebr. March 23, 1936.
- (4) Seed Collection of Woody Plants. U. S. Soil Conservation Service,
Region 7, Salina, Kans. Mimeo. May 1936.
- (5) Technical Notes - Lake States Forest Exp. Station, St. Paul, Minn. 1935.
- (6) Muenscher, V. C. Storage and Germination of Seeds of Aquatic Plants.
Cornell Agr. Exp. Sta. Bul. 652, July 1936.
- (7) Tesov, N. E. and A. P. Tolski,
Tree Seeds of the Soviet Union 1935.
- (8) Kern, E. E. Vazhneishie inozemnye drevesnye porody prigodnye dlia
razvedeniia V. U. S. S. R. 1934.
- (9) Erosion Control Nursery Data, Bureau of Plant Industry,
1933 Seed Crop. Cheyenne, Wyo.
- (10) Erosion Control Nursery Data, Bureau of Plant Industry,
1933 Seed Crop. Mandan, N. D.
- (11) Erosion Control Nursery Data, Bureau of Plant Industry,
1934 Seed Crop. Mandan, N. D.
- (12) Erosion Control Nursery Data, Bureau of Plant Industry,
1934 Seed Crop. Statesville, N. C.
- (13) Erosion Control Nursery Data, Bureau of Plant Industry,
1934 Seed Crop. Cheyenne, Wyo.
- (14) Erosion Control Nursery Data, Bureau of Plant Industry,
1934 Seed Crop. Tucson, Ariz.
- (15) Soil Conservation Service Data, Region 1, 1935 Seed Crop.

INTRODUCTION

At the beginning of the large-scale conservation work undertaken by the Soil Conservation Service, the technicians of the Service were confronted with the necessity for producing large numbers of plants that had never before been grown, at least in the enormous numbers requested. Of course, the question arose immediately as to collection and handling of seed, including especially the amount of seed required to grow a given number of plants. An examination of all available information brought out the fact that, except for a few well known forest species, relatively little was on record of immediately practical help to our nurserymen.

During the past six years the technicians of the Soil Conservation Service have accumulated a large amount of information relative to number of seeds per pound, germination and cutting tests, and recommended handling. Workers in the United States Forest Service and other agencies have likewise made available considerable information of this nature. All records of this sort, from whatever source obtained, have been assembled in the Washington office of the Nursery Division and are presented herewith.

Although the compiler has made numerous changes in nomenclature, has transposed Centigrade temperatures to Fahrenheit, translated various types of seed weight into number of seed per pound, and has also averaged various numerical reports from the same source, it must be emphasized that the responsibility and credit for the work reported rests with the workers referred to, especially to the technicians of the Soil Conservation Service.

It will be immediately obvious to the reader that many omissions exist in our knowledge, even with plants playing predominant roles in the conservation program. This is particularly true for records on number of usable plants obtained per pound of seed sown. Accordingly, it is requested that the Washington office of the Nursery Division be advised of any pertinent information at hand, both as regards apparent errors or questionable figures, and especially any available data on yield of plants per pound of seed. It is hoped that with such information eventually this provisional mimeographed list can appear in a more permanent form.

KEY TO REFERENCES (Con't.)

- (37) Soil Conservation Service Data, Region 7, 1936 Seed Crop.
- (38) Flemion, F., Contr. Boyce Thomp. Inst. 6: 91-102, 1934.
- (39) Barton, L. V., Contr. Boyce Thomp. Inst. 6: 68-89, 1934.
- (40) Schroeder, E. M., Contr. Boyce Thomp. Inst. 7: 411-419, 1935.
- (41) Barton, L. V., Contr. Boyce Thomp. Inst. 7: 379-404, 1935.
- (42) Spaeth, J. N., Cornell Memoir 169, 1934.
- (43) Herbst, Fred, Data obtained by Dr. M. T. Mann, Geneva, N. Y., 1935.
Mimeographed.
- (44) Crocker, Wm. and L. V. Barton, Contr. Boyce Thomp. Inst. 3: 385-404, 1931.
- (45) Flemion, F., Contr. Boyce Thomp. Inst. 3: 413-440, 1931.
- (46) Chadwick, L. C. Amer. Nurseryman 62: 3-9, 1935.
- (47) Laurie, A. and L. C. Chadwick, The Modern Nursery, 1931.
- (48) Davis, C. H., Florists' Exch. Nov. 13, 1926.
- (49) Crocker, Wm., Florists' Rev. 65: 43-46, 1930.
- (50) Bailey, L. H., The Nursery Manual, 1920.
- (51) Rafn. J., Trans. R. Scottish Arboricultural Soc. 1901.
- (52) Pennsylvania State Forest Nursery, unpublished data.
- (53) Soil Conservation Service Data, Region 1, 1937 Seed Crop.
- (54) Sen Gupta, J. N., Indian Forest Rec. 2 (5) 1937.
- (55) Jelley, M. E., Jour. Forestry, September 1937.
- (56) Mississippi Extension Bull. 87, 1937.
- (57) Giersback, J., Contr. Boyce Thomp. Inst. 9: 71-103, 1937.
- (58) Soil Conservation Service Data Region 2, 1937 Seed Crop.
- (59) Soil Conservation Service Data Region 7, 1937 Seed Crop.

KEY TO REFERENCES (Con't.)

- (60) Mirov, N. T. and C. J. Kraebel. Collecting and Handling of the Seeds of California Wild Plants. Mimeo. 1937.
- (61) Hutton & Porter, Iowa State Col. Jour. Sci. 12: 5-4, 1937.
- (62) Pieters, A. J., Seedling Rates for Certain Field Crops, July 1937. Bureau of Plant Industry Mimeo. Publ.
- (63) United States Department of Agriculture Circular No. 480. 1938.
- (64) Soil Conservation Service Data, Region 4, 1938.
- (65) Hiley, W. E. Improvement of Woodlands. London 1931.
- (66) Nelson, M. L., Occasional Paper 78, So. For. Exp. Sta. 1938.
- (67) New York State Conservation Dept., Notes on Forest Investigations.
- (68) Barton, L. V. Contr. Boyce Thomp. Inst. 10: 221-233, 1939.
- (69) MacKinney, A. L. and W. E. McQuilkin, Jour. Forestry 36: 1123-1127. 1938
- (70) Flemion, F. Contr. Boyce Thomp. Inst. 9: 409-423, 1938.
- (71) Stevens, C. A. Amer. Jour. Bot. 19: 784-794, 1938.
- (72) Soil Conservation Service Data, Region 1, 1938.
- (73) " " " " " 2, 1938.
- (74) " " " " " 7, 1938.
- (75) " " " " " 8, 1938.
- (76) " " " " " 9, 1938.
- (77) " " " " " 11, 1938.
- (78) Schroeder, E. M. & Barton, L. V., Contr. Boyce Thomp. Inst. 10: 235-255, 1939.

Note: SCS Data for 1938 includes some summarizations of previous records. In all cases, Regions indicated are those existing prior to 1939.

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
ABELIA (Abelia)	47							stratify	spring	
ABIES ARIZONICA (Corkbark fir)	1 46		45,000			58	dry	stratify 60 days at 41° F.		
ABIES BALSAMEA (Balsam fir)	1 2 3		25,540			25 24	dry, cool	none		
	25		56,249			40				
	31		65,000			14	30° F. ear- boys	30 days at 43° F.	Oct.	
	43		59,000			47				
	51		50,000							1,200
	52									
ABIES BRACHYPHYLLA (See A. homolepis)										
ABIES CEPHALONICA (Greek fir)	51		9,360		38	33				
ABIES CILICICA (Cilician fir)	51		7,800			40				
ABIES CONCOLOR (White fir)	1 8	8	16,000			36				
	22		13,450							
	25		24,000			48		30 days at 43° F.		
	43					67				
	51		14,550			67				
	52		15,200							
	77	10		fall	22		dry		spring	

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
ABIES DENS/ (See A. spectabilis)										
ABIES FIRMA (Momi fir)	8 51		10,900 10,350			42				
ABIES FRASERI (Southern balsam fir)	1	4	44,000			68				
ABIES GRINDIS (Lowland white fir)	1 8 43 51 52 65		34,064 23,400 40,000 18,018 22,000			15 52		30 days at 43° F.		
ABIES HOWEII (Nikko fir)	51		15,534			23				
ABIES LASIOCARPA (Alpine fir)	1 10 51		51,262 37,228 39,020		76	32				
ABIES MAGNIFICA (California red fir)	1 23 51		07,000 07,200			08 52				
ABIES NOBILIS (Noble fir)	1	5	10,008							
ABIES NOBILIS GLAUC (Blueleaf noble fir)	51		11,190			22				
ABIES NORDMANNIANA (Nordmann fir)	7 8 51 52		7,100 6,780 8,320			45 38				

Name	Ref. No.	Th Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	satlo Plants Lb. Seed
ABIES PECTINATA (Silver fir)	8 51 52		10,000 7,950 8,160			52				740
ABIES PINDROW (Pindrow fir)	54		12,320	Oct.		13				
ABIES PINSAPO (Spanish fir)	51		9,700			31				
ABIES SIBIRICA (Siberian fir)	7 8 10 51		42,090 30,706 47,060		48	50 27				
ABIES SPECTABILIS (Himalayan fir)	54		8,090	Sept.-Nov.						
ABIES SUBALPINA (See A. lasiocarpa)										
ABIES VEITCHI (Veitch fir)	51 54		46,955 60,000			59 10				
ABIES WEBBIANA (See A. spectabilis)										
ACACIA (Acacia)	47 50							12 days H ₂ O H ₂ O	soon as ripe soon as ripe	880
ACACIA ARABICA (Gum arabic tree)	54		3,680	Feb.-May		63				
ACACIA AURICULIFORMIS	54		19,200	Mar.-Apr.		67				11,300
ACACIA BERLANDIERI (Guaquillo)	64			spring-summer			dry			
ACACIA CATECHU	54		16,224	Dec.-Mar.		71				8,788

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
ACACIA CONstricta (Mescal acacia)	17					45		hot H ₂ O		
ACACIA CYANOPHYLLA (Blue leaved wattle)	54		32,000	June		94				29,800
ACACIA DEALBATA (See A. decurrens dealbata)										
ACACIA DECURRENS (Green wattle)	54		36,000							20,900
ACACIA DECURRENS DEALBATA	54		39,200							
ACACIA FARNESIANA (Sweet acacia)	17 54 75		4,000 9,171	Feb.-July		28	dry	scarify		
ACACIA TERRUGINEA	54		2,560	Mar.-Apr.		90				2,250
ACACIA GREGGI (Long-flowered catclaw)	17 64			July-Aug. July-Aug.		60	dry	hot H ₂ O		
ACACIA LENTICULARIS	54		1,440	Jan.-Apr.		80				
ACACIA LEUCOPHLOEA	54		21,600	Jan.-June		28				5,800
ACACIA MODESTA	54		12,000	Jan.-Nov.		50				1,350
ACACIA SUNDERA	54		12,160	Feb.-May		58				10,900
ACALYPHA VIRGINICA	71		677,611							
ACANTHOPHANIX	47							stratify	fall or spring	
	50							stratify	fall or spring	

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
ACANTHOPANAX DIVARICATUM	53		62,700	Sept.	98					3,150
ACANTHOPANAX GIRALDI	53		60,400	Sept.	90					
ACER CAESIUM	54		5,440 (fruit)							
ACER CAMBELLI	54		12,400	Nov.-Dec.		75				
ACER CAMPESTRE (Hedge maple)	8		5,636							
ACER CIRCINATUM (Vine maple)	77		5,530	fall	55			stratify	spring	
ACER DASYCARPUM (See A. saccharinum) (Silver maple)										
ACER GINNALA (Amur maple)	18 76		19,548 15,000	summer	60	52	cellar.	stratify Dec.-Mar.	fall or spring	
ACER GLABRUM (Dwarf maple)	9 18		13,200 20,300		80					
ACER IBERICUM (See A. monspessulanum)										
ACER INSIGNE (Persian maple)	54		3,360							
ACER MACROPHYLLUM (Oregon maple)	1 22 60 77		2,752 3,360 3,200 3,360	Sept.-Oct. fall	87	90		stratify 60 days stratify	spring	
ACER MONSPESSULANUM	54		4,320 (fruit)							

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
ACER NEGUNDO (Boxelder)	1		13,000			77		stratify		
	2				78					
	7		11,181		87					
	8									
	9		14,000	Sept.		70		stratify		
	12		12,000			70				
	15	34	10,368		85					5,000
	18		14,720							
	23					50				
	25									
ACER NIGRUM (Black maple)	32						dry	H ₂ O	fall or spring	
	75	75		fall	30		dry		early spring	
	76		10,350	fall	85	80	cellar	stratify Dec.-Mar.	fall or spring	260
	72	100	4,250	fall	50		dry		fall	
ACER OBLONGUM	54		14,000 (fruit)	Jan.-Apr.						
	8		35,227							
ACER PLEURANTHUM (Japanese maple)	46									
	54		3,080 (Fruit)							
ACER PICTUM (Painted maple)	54		1,272				cool, moist	stratify 90 to 120 days at 32-50°F.		
	1			fall		94				
ACER PLATANOIDES (Norway maple)	4		4,136			50				
	7									
	8									
	20							stratify immediately		
	74	42	4,487	fall	85			stratify	spring	
	77		6,000		83					

Name	Ref. No.	Lb. Seed Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable nts Lb. Seed
ACER FLATINOIDES V.R. SCHWEDLERI (Schwedler maple)	22		6,000							
ACER PSEUDOPLATANUS (Sycamore maple)	7		5,590			50				
	8		18,420			72				
	12		38,181	spring		72			spring	
	15	100	18,500			43				
ACER RUBRUM (Red maple)	25			spring before shrivel and fall			do not store	none	immediately	
	32						moist		immediately soon as ripe	
	46									
	50									
	72		18,000	spring	90	50	moist	none	immediately	
	73			spring						
ACER SACCHARINUM (silver maple)	1		2,400	spring			must not dry		soon as ripe	
	50			spring		50				
	72			spring		50				
ACER SACCHARUM (sugar maple)	1		7,130			58				
	8		3,363			58				
	12	100	7,100	Sept.	38	58		stratify		
	15		4,010							
	19	44				40				
	23		7,498			40				
	25									
	47									
	72	60	5,780	fall	50		must not dry		fall	
	77		2,550		85		dry	stratify	spring	

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
ACER TATRICUM (Tatarian maple)	3 7 9 11	75	15,000 18,160	Sept.	55 91 92		stratify		
ACHILLEA MILLEFOLIUM	71		1,135,000						
ACNIDA TUBERCULATA	71		2,389,473						
ACORUS CALAMUS (Sweetflag)	6			late.	54		210 days H ₂ O at 35° F.		
ACER CARPUS FRAXINIFOLIUS	54		11,200	Mar.-June	49				1,100
ACTINIDIA (Actinidia)	26 47 50						none. none	fall or spring spring spring	
ADENOSTOMA FASCICULATUM (Chamise)	60		113,000	May-Sept.	75		10% H ₂ SO ₄ $\frac{1}{4}$ hr.		
ADENOSTOMA SPARSIFOLIUM (Redshanks)	60		400,000	May-June	40		10% H ₂ SO ₄ $\frac{1}{4}$ hr.		
ADINA CORDIFOLIA	54		5,001,600	Oct.-June	90				
AEGLAE MAMELOS	54		2,400	Mar.-May					
AEUROPEUS LITORALIS	75			June	77	dry	none	spring	
ASCULUS (Horsechestnut)	32 47 50 72					must not dry	stratify stratify stratify	fall or spring fall or spring	

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt Test %	Germin Test %	Type of Storage	Type of Treatment	Time to Plant	Yield Plants Lb. Seed
<i>FESCULUS CALIFORNICA</i> (California buckeye)	60		10	Nov.	75					
<i>FESCULUS INDICA</i>	54		18	Sept.-Oct.		81				
<i>FESCULUS OCTANDRA</i> (Yellow buckeye)	1					49				
<i>FESCULUS PUNDUANA</i>	54		20							
<i>AFZELIA BIJUGA</i>	54		200			57				
<i>AGATHIS AUSTRALIS</i> (Kauri-pine)	54		29,000							
<i>AGLAIA ROXBURGHIANA</i> (See A. undulata)										
<i>AGLAIA UNDULATA</i>	54					72				
<i>AGOSERIS HETEROPHYLLA</i>	60		722,000			20		none		
<i>AGOSERIS RETROSA</i>	60		224,000	May		20		none		
<i>ALLANTHUS ALTISSIMA</i> (Allanthus)	1 3 7 8 12 26 32 37 47 50	88 1 58	17,000 14,000	Sept. Aug.	75	56 50		stratify stratify or dry none	spring	2,000
	72			fall				stratify none	spring soon as rip- fall or	1,800
	45 77	30	15,000	fall & winter fall	87 85			none none or stratify	spring spring fall or spring spring fall or spring	1,200 980

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
AILANTHUS EXCELSA	54		4,320	May						
AILANTHUS GLANDULOSA (See A. altissima)										
AILANTHUS GRANDIS	54		544	Nov.-Jan.		45				
ALBIZZIA (Albizzia)	47							H ₂ O 1 day	soon as ripe	
	50							H ₂ O	soon as ripe	
ALBIZZIA AMARA	54		6,560	Feb.-Apr.		79				2,665
ALBIZZIA JULIBRISSIN (Silktree)	12 32 73	40	11,000	Nov. early fall		80	dry dry dry	scarify H ₂ O scarify	spring fall or spring	
ALBIZZIA LEBBEK (Woman's tongue tree)	54		4,480	Nov.-Feb.		88				2,775
ALBIZZIA LOPHANTHA	54		6,720							2,200
ALBIZZIA LUCIDA	54		6,800	Feb.-Apr.		42				
ALBIZZIA MARGINATA (See A. stipulata)										
ALBIZZIA MOLUCCANA	54		19,200	May-June						5,400
ALBIZZIA ODORATISSIMA	54		6,928			30				3,300
ALBIZZIA PROCERA	54		9,360	Jan.-Apr.		68				5,000
ALBIZZIA STIPULATA	54		21,200	Dec.-Mar.		45				
ALEURITES FORDI (Tung-oil tree)	54 56	56	180 1,850 per bu.	Nov. fall		31	dry		Feb.	39
ALEURITES MOLUCCANA (Candlenut-tree)	54		67	Nov.						

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants lb. Seed
ALISMA PLANTAGO-AQUATICA (Waterplantain)	6 71		825,454 71,496	Oct.		86		180 days H ₂ O at 35° F.		
ALLIONIA NYCTAGINEA	71									
ALNUS (Alder)	32 47 50						dry	none none none	spring fall or spring spring	
ALNUS CORDIFOLIA	8		202,727							
ALNUS GLUTINOSA (European alder)	8 51 54		256,000 409,600		15					
ALNUS INCANA (Speckled alder)	2 8 18 51 54 72		450,000 480,000 675,000 574,400	fall	27	24		stratify		
ALNUS NEPALENSIS	54		519,200	fall	75	70				16,800
ALNUS NITIDA	54		401,600	Nov.-Dec.						
ALNUS RHOMBIFOLIA (White alder)	60		687,000	May-Oct.		56		none		
ALNUS RUBRA (Red alder)	1 60 77		363,200 1,087,000 614,400	May-July fall	15	40 14		none	spring	
ALNUS RUGOSA (Smooth alder)	72			fall						

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Useful Plants Lb. Seed
<i>ALNUS TEMULIFOLIA</i> (Mountain alder)	00		675,000	Aug.-Sept.		16		none		
<i>ALNUS VIRIDIS</i> (European green alder)	43				46	29		30 days at 43°F.		
<i>ALNUS VIRIDIS</i> V.P. STIMULATA (Thin-leaf alder)	60		2,021,000	Aug.-Sept.		12		none		
<i>ALSEODAPHNE OMDENI</i>	54		130							
<i>ALSTONIA SCHOLARIS</i>	54		300,800							
<i>ALTUNA EVOLUTA</i>	54		522,400	Oct.-Dec.		15				
<i>AMERANTHUS BLITOIDES</i>	71		477,894							
<i>AMERANTHUS GRECIZANS</i> (Tumbleweed)	71		1,973,913							
<i>AMERANTHUS RETROFLEXUS</i>	71		1,194,736							
<i>AMBROSIA ARTEMISIFOLIA</i>	71		114,936							
<i>AMBROSIA TRIFIDA</i>	71		26,091							
<i>AMELANCHIER</i> (Serviceberry)	50							stratify	soon as ripe	
	53		70,200							
<i>AMELANCHIER ALNIFOLIA</i> (Saskatoon shadblow)	3	2	63,000	July				stratify		
	18		112,650							
	77		51,300	early summer	74		dry	stratify 140 days at 40°F.		
<i>AMELANCHIER RAVENI</i> (Green serviceberry)	19		31,550						spring	2,330

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Cls an Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
AMELANCHIER BASALTICOLA	77	12	57,200	early summer	81			stratify 140 days at 40°F.	spring	
AMELANCHIER CANADENSIS (Canada serviceberry)	2									
	12	.33	50,000	July		70		stratify		
	19	30		June				stratify		
	44					38	dry	dry 90 days or stratify		
	47							stratify 90 days at 32-50°F.	soon as ripe	
	49							stratify 90 days at 31-41°F.		
AMELANCHIER HUMILIS (Small serviceberry)	53		69,400		86					
	58	1	67,200	June	95					
	72									
AMELANCHIER HUMILIS (Small serviceberry)	3	2	63,000	July				stratify		
AMELANCHIER INTERMEDIATA (See A. oblongifolia)										
AMELANCHIER OBLONGIFOLIA (Thicket skadblow)	53		69,550	June	97					
AMORPHA ROBITUKA	54		880	May-June						
AMORPHA WALLICHI	54		71	May-June		66				
AMORPHA (False indigo)	47							none	soon as ripe	
AMORPHA ANGUSTIFOLIA (See A. fruticosa)										
AMORPHA CALIFORNICA (California indigobush)	60		38,000	July-Sept.		42		none		

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
AMORPHA CANESCENS (Leadplant)	13					76				
	17					30				
	18									
	53		105,759							
	72		92,800	late summer	99		dry		fall	22,400
AMORPHA CYANOSTACHYA (See A. fruticosa)										
AMORPHA FRAGRANS	13					96				
	18		115,800							
	12	100	55,000	Aug.	85	60	dry			
	16				48					
	17				60					
AMORPHA FRUTICOSA (False-indigo)	18		55,000		90					
	20				70					
	32									
	35									
	37	63	54,013			68	dry	stratify none or soak none	Nov. spring	1,051
	59				75	42	dry			
	61					73				
	72		57,000	late summer			dry	shake 10 minutes	fall	
	73		61,824		40		dry			
	74		60,834	fall	92	61	dry	none	spring	4,300
AMORPHA GLABRA	76		55,000	fall	90	75	dry	H ₂ O 7 days	spring	1,051
	77		67,200	fall	76		dry	none or stratify	spring	125
							dry	Inoculate	spring	5,600
	72		65,400	late summer			dry		fall	17,000
	9		59,682		86	50				
AMORPHA MICROPHYLLA (Dwarf-indigo)	17									
AMORPHA NANA (See A. microphylla)										
AMORPHA TENNESSEENSIS	72		79,700	late summer			dry		fall	27,000

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
ANTHOCEPHALUS MORINDAEFOLIUS	54		681,000	May-Oct.						2,500
AFDOPAPPUS BLOOMERI (Bloomer goldenbush)	60		233,000	Sept.-Oct.		50		none		
AFLOPAPPUS ERICOIDES (Mock-heather)	60		718,000	Oct.-Nov.		80		none		
AFLOPAPPUS NAUSEOSUS (Rubber goldenbush)	60		335,000	Oct.-Nov.		36		none		
AFLOPAPPUS PARISHI (Parish goldenbush)	60		1,633,000	Oct.-Nov.		95		none		
AFLGAPPUS PINIFOLIUS (Pinel-leaf goldenbush)	60		1,000,000	Oct.-Nov.		48		none		
AFLOPAPPUS SQUAREFOLIUS (Coast goldenbush)	60		173,000	Aug.-Oct.		80		none		
AFOCYNUM HYPERICIFOLIUM	71		648,571							
AQUILARIA AGALLOCHA	54		9,280							
ARABIS HIRSUTA	71		7,566,066							
ARALIA (Arelia)	47			spring				stratify	soon as ripe	
ARALIA SPINOSA (Hercules club)	72	11	105,000	late summer	80					
ARAUCARIA CUNNINGHAMI	54		1,728			12		stratify	fall or stratify	
ARBUTUS MENZIESI (Madrone)	26			fall						
	60		2,000 (drv fruits)	Oct.-Dec.		55		stratify 90 days		
ARCTIUM MINUS	71		60,533							

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
ARCTOSTAPHYLOS PATULA (Greenleaf manzanita)	60		1,700 (dry fruits)	Aug.-Oct.			stratify 90 days		
ARCTOSTAPHYLOS PUNGENS (Pointleaf manzanita)	17				34				
ARCTOSTAPHYLOS UVA-URSI (Bearberry)	45					clean	stratify 140 days at 41-50°F. treat entire stones H ₂ SO ₄ 3-5 hrs.	immediately	
	57			June	75				
	77	12	26,800	fall					
ARISTOLOCHIA	47						stratify 140 days at 50°F.	fall or spring	
ARISTOLOCHIA MACROPHYLLA (See A. sipho)									
ARISTOLOCHIA SIPHO (Dutchmans-pipe)	8		18,272				stratify 90 days at 32-41°F. stratify	fall	
ARONIA (Chokeberry)	47								
	50				88				
	53		184,160						
ARONIA ARBUTIFOLIA (Red chokeberry)	15		7,355 (dry berries)		70				
	19	32							
	44								
	46				90	clean and dry	stratify 60-120 days at 34°F. stratify 90 days at 32-41°F.		
	72	4	256,000	late fall					
ARONIA FLORIBUNDA (Purple-fruited chokeberry)	44				92	clean and dry	stratify 60 days at 34°F. stratify 60 days at 32-35°F.		
	47								

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
ARONIA MELANOCARPA (Black chokeberry)	19 72	24 8	233,208	early fall	96					
ARTEMISIA ARBUSCULA (Low sagebrush)	17					24				
ARTEMISIA AROMATICA	17					52				
ARTEMISIA BIENNIS	71		6,053,333							
ARTEMISIA CAUDATA	71		4,540,000							
ARTEMISIA FILIFOLIA (Sand sagebrush)	17					56				
ARTEMISIA TRIDENTATA (Sagebrush)	17					32				
ARTOCARPUS CHAPLASHA	54		555	June-Aug.		88				230
ARTOCARPUS HIRSUTA	54		640	May-July		80				470
ARTOCARPUS INTEGRIFOLIA	54		30	May-July		75				
ARTOCARPUS LAKOOCHA	54		1,280	July						
ARUM (Arum)	50			fall				stratify	soon as ripe or stratify	1,050
ASCLEPIAS MEXICANA (Narrow-leaf milkweed)	60		72,000	Aug.-Oct.		96		none		
ASCLEPIAS SYRIACA	71		108,095							

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Found	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Useable Plants Lb. Seed
<i>ALPISIA TRILCRA</i> (rapaw)	13		1,200			50				
	32							stratify	fall or spring soon as ripe	
	47							none		
	50							stratify	fall or spring	
<i>ASTRAGALUS OFFICINALIS</i> (Asparagus)	72	11		fall	90					
	17			summer fall		76	dry	none	April	
	37	60								
	50		21,115			97	dry	none	spring	
	74		24,198	April	99		dry	none	spring	
	75						dry	none	May	5,010
<i>ASTER CANESCENS</i>	60		821,000	June		14		none		
<i>ASTRAGALUS ARTISELLI</i> (Locoweed)	60		183,000	June		23		none		
<i>ASTRAGALUS CHINENSIS</i>	75									
<i>ASTRAGALUS CRASSICARPUS</i>	71		146,451				dry	scarify		
<i>ASTRAGALUS FLEXUOSUS</i>	71		336,296							
<i>ASTRAGALUS MORTONI</i>	75						dry	scarify		
<i>ASTRAGALUS NUTTALLIANUS</i>	64			spring			dry		fall	
<i>ASTRAGALUS RIBUI</i>	77			Sept.		55	dry	scarify	early spring	
<i>APTILLEX ARGENTEA</i>	71		60,533							

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Found	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
<i>ATRIPLEX CANESCENS</i> (Wingscale)	13 17 22 22 77	(1935)	25,600 10,500 18,050	fall late summer	10	22 43				
<i>ATRIPLEX COLLINA</i> (See <i>A. confertifolia</i>)										
<i>ATRIPLEX CONFERTIFOLIA</i> (Shadscale)	13 17 77		15,200	late summer		0 21				
<i>ATRIPLEX CUNEATA</i>	17					42				
<i>ATRIPLEX GARRETTI</i> (See <i>A. canescens</i>)										
<i>ATRIPLEX HALTUS</i>	17				4					
<i>ATRIPLEX HASTATA</i>	71		908,000							
<i>ATRIPLEX HORTENSIS</i> (Garden orch)	13 17				97 46					
<i>ATRIPLEX JOHNSTONI</i> (Johnston saltbush)	60		63,000	May-July	22			none		
<i>ATRIPLEX LENTIFORMIS</i> (Big saltbush)	17 21		412,300			34				
<i>ATRIPLEX LINEARIS</i> (See <i>A. canescens</i>)										
<i>ATRIPLEX NUTTALLI</i>	13					65				
<i>ATRIPLEX SATULI</i>	71		211,162							

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
ATRIPLEX POLYCARPA (Cattle spinach)	17					62				
ATRIPLEX ROSEA	71		151,333							
ATRIPLEX SEMIBACCATA (Australian saltbush)	17					78				
	21		92,500					none		
	60		75,000	July-Oct.		64		none	soon as ripe soon as ripe	
AUCUBA	47									
	50									
AVICENNIA OFFICINALIS	54		62 (fruits)	Aug.-Oct.						
AXYRIS AMARANTHOIDES	71		112,727							
AZADIRACHTA INDICA (See Melia azadirachta)										
AZALEA OCCIDENTALIS	60		4,000,000	July-Sept.		75				
BACCHARIS	47							none	fall or spring	
BACCHARIS PILULARIS (Kidneywort)	60		8,200,000	Sept.-Nov.				none		
BACCHARIS SAROTHOIDES (Rosinbrush)	17					64				
BACCHARIS VIMINEA (Male fat)	60		5,000,000	May		75				
BACCHARIS SP.	75			June			dry	none	June	3,000 (Unclean)

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
BALANOCARPUS UTILIS	54		96 (fruits)	Nov.-Dec.		67				
BAMBUSA ARUNDINACEA (See Nestus barbonicus)										
BAMBUSA NUTANS	54		8,480							
BAMBUSA POLYSPORA	54		12,000							
BAMBUSA TULDA (See B. tuldooides)										
BAMBUSA TULDONES	54		10,000	Jan.		39				
BARRINGTONIA ACUTANGULA	54		640	Dec.						
BASSIA BUTYRACEA	54		420	June-July						51
BASSIA ELLIPTICA	54		105	July-Aug.		53				75
BASSIA LATIFOLIA	54		192	June-July						22
BASSIA LONGIFOLIA	54		192	June						
BASSIA POLYANTHA	54		3,120	Apr.-May		75				
BAUHINIA GALFANI	54					64				
BAUHINIA MALABARICA	54		5,120	Jan.-May						
BAUHINIA PURPUREA	54		2,080	Jan.-May		91				1,920
BAUHINIA RACEMOSA	54		3,520	Jan.-Feb.		77				2,450
BAUHINIA RETUSA	54		690	May		82				
BAUHINIA VITICATA (Buddhist Bauhinia)	54		1,110	Apr.-May		94				

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
BEBBIA JUNCEA	60		745,000	June		30		none		
BELAMCANDA (Blackberry-lily)	47							stratify 90 days at 41-50°F.		
BELOPERONE CALIFORNICA	60		47,000	June		96		none		
BENZON AESTIVALE (Spicebush)	15 19 26 40	16 23	4,536	fall		83	Must not dry	stratify stratify 77°F. 30 days; then 90 days at 44-50°F. none	fall	
BERBERIS (Barberry)	47							none	soon as ripe	
	50							stratify	soon as ripe or stratify soon as ripe or stratify	
BERBERIS AMURENSIS (Amur barberry)	15 72		39,000 39,250	late fall						5,800
BERBERIS AQUIFOLIUM (Oregon hollygrape)	22 77	8	38,409 43,035	Sept.	99		dry		fall or spring	
BERBERIS CANADENSIS LEICHTLINI	72		52,860	late fall			dry		fall or spring	1,200
BERBERIS CHINENSIS AMURENSIS	72		40,320	late fall			dry		fall or spring	6,000

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
BERBERIS DECLINATA OXYHYLLA	15		68,240	late fall			dry		fall or spring	4,600
BERBERIS DIELSIANA	15		55,550	late fall			dry		fall or spring	2,700
BERBERIS DUROBRIVENSIS	15		68,922	late fall			dry		fall or spring	3,600
BERBERIS EMARGINATA BRITZENSIS	15		27,136	late fall			dry		fall or spring	6,000
BERBERIS FREMONTI (Fremont barberry)	17					81		none		
BERBERIS FLEMINGIANA (Red hollygrape)	18		102,550							
BERBERIS LEICHLINA	15		52,860							
BERBERIS MACRANTHA	15		56,176	late fall			dry		fall or spring	2,000
BERBERIS MEEHANII	15		65,400	late fall			dry		fall or spring	6,100
BERBERIS NERVOSA (Longleaf hollygrape)	77	12	29,640		95					
BERBERIS NEVINI	60		57,000	June				stratify 90 days		
BERBERIS ORLONGA	15		38,528	late fall			dry		fall or spring	2,200
BERBERIS POIKETII	15		63,328	late fall			dry		fall or spring	2,000

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Chitt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
BERBERIS THUNBERGI (Japanese barberry)	12	25	28,000	winter				stratify		
	15		28,000	fall				stratify 35-60 days at 41°F.	fall or stratify April	3,500
	19	16			91		clean and dry	stratify 15-30 days at 32-41°F.	April	
	20						dry			
	46			early fall			dry		fall or spring	2,000
BERBERIS VERNAE	72			late fall			dry		fall or spring	9,000
BERBERIS VULGARIS (Common barberry)	15		41,216							
BERBERIS VULGARIS ATROPURPUREA (Purple barberry)	15		34,048							25
BERRIA AMOMILLA	54		8,000	Apr.-June						
BERTEROA INCANA	71		1,008,888							4,000
BETA VULGARIS (Beet)	62		24,300							
	63		24,480							
BETULA	26			early fall						
							Must not dry	stratify	soon as ripe	
							Must not dry	stratify	soon as ripe	
BETULA ALNOIDES	54		388,500	Jan.-June		34				
BETULA CYLINDROSTACHYA (See B. alnoides)										
BETULA FONTINALIS	9		1,134,000			82				
(Red birch)	13					16		none		
	60		4,000,000	July-Aug.						

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per pound	Time to Collect	Cutt Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
BETULA VERRUCOSA	51				39				
BIDENS ACUTA	71		63,953						
BIDENS FRONDOSA	71		129,714						
BIDENS VULGATUS	71		89,019						
BIGNONIA RADICANS (Trumpet creeper)	12 26			Oct. late summer		dry	none	spring	
BISCHOFIA JAVANICA	54		43,760	June-June	50				
BISCHOFIA TRIFOLIATA (See B. javanica)									
BOCAGEA ELLIPTICA	54		384 (fruit)						
BOEHMERIA RUGULOSA	54			June	6				
BOLTONIA ASTEROIDES	71		2,063,630						
BOMBAX ANCEPS	54		4,900		10				1,800
BOMBAX INSIGNE	54		6,400	April					
BOMBAX MALABARICUM (Malabar bombax)	54		14,640	Mar.-May	48				2,370
BOSWELLIA SERICATA	54		6,400	May-June	26				
BRASSICA ARVENSIS	71		172,952						
BRASSICA JUNCEA	71		172,952						
BRASSICA NAPUS (Rape)	62 63		104,000 104,320						

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
BRASSICA NIGRA (Black mustard)	60 71		292,000 207,058	June		91		none		
BRASSICA RAPA (Turnip)	62 63		154,000 154,240							
FRAXINERIA ANGUSTIFOLIA	71		181,600							
BRICKELLIA CALIFORNICA	60		599,000	Aug.-Oct.		36		none		
BRICKELLIA INCANA	60		171,000	May-June		52		none		
BRICKELLIA squamulosa	54					0				
BRIDELIA RETUSA	54		6,000	Jan.-Apr.						5,750
BROUSSONETIA PAPYRIFERA (Paper mulberry)	50								soon as ripe or second spring	28
BUCHANANIA LATIFOLIA	54		244,800	June-Sept.		1				
BUCKLANDIA POPULNEA	54		1,760	May-June		10				
BUMELIA LANUGINOSA (Gum elastic)	3 4 37	20 25	123,200 5,000	year Oct. fall		75				42,000
BURSA BURSA-PASTORIS	71		4,729,160				dry dry	20 minutes H ₂ SO ₄		
BUTSERA SERRATA (See Protium serratum)										
BUTEA FRONDOSA	54		512	May-June		88				415

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
BUTOMUS UMBELLATUS (Flowering rush)	6			Sept.		64		210 days H ₂ O at 35°F.		
BUXUS (Box)	26 47 50			full			Must not dry	soak and stratify soak and stratify	spring soon as ripe fall or spring	
BUXUS SEMPERVIRENS (Common box tree)	7 8 26 54		34,727 31,200	Sept.-Oct.		82 6		stratify		
BUXUS WALLICHIANA	54		1,150							

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
CAESALPINIA	50							soak hot H ₂ O		6,550
CAESALPINIA CORIARIA (Divi-divi)	54		16,000							
CAESALPINIA DIGYNA	54		640							260
CAESALPINIA GILLIESI	14					62				
CAESALPINIA SAPPAN (Sappan)	54		64 (fruits)							
CALLA PALUSTRIS (Calla)	6			Sept.		72		150 days H ₂ O at 35°F.		
CALLIANDRA ERIOPHYLLA (False mesquite)	14 17 75			spring		100 64	dry	hot H ₂ O none	May	
CALLIANDRA HUMILIS	14 17 75					86 20	dry	30 minutes H ₂ SO ₄ none	late spring	
CALLICARPA (Beautyberry)	26 47			fall				stratify none	fall or stratify fall	
CALLICARPA AMERICANA (French mulberry)	12 58 73	20 30	85,000 275,000	Sept. fall		90 8 5		stratify depulp	spring	
CALLICARPA PURPUREA (Chinese beautyberry)	73			fall		80	dry		winter	
CALLUNA VULGARIS (Heather)	26			fall			dry	none	fall or spring under glass	

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
CALOPHYLLUM INOPHYLLUM	54		62 (fruit)	Mar.		85				6 (fruit)
CALOPHYLLUM POLYANTHUM	54		1,920	Apr.-May						
CALOPHYLLUM TOMENTOSUM	54		69 (fruit)			9				
CALYCANTHUS (Sweetshrub)	26 47 50						dry	none none	spring spring spring	
CALYCANTHUS FERTILIS FERAX	72			fall		99	acid peat	stratify 95 days at 41°F.	spring	1,000
CALYCANTHUS FLORIDUS (Carolina allspice)	72			fall	92		dry		spring	1,180
CALYCANTHUS OCCIDENTALIS (California sweetbrush)	60		8,000	Sept.-Oct.		82		none		
CAMELINA DENTATA	71		171,320							
CAMELINA MICROCARPA	71		1,650,909							
CAMELINA SATIVA	71		454,000							
CAMELLIA (Camellia)	26 47			summer			moist	stratify hot H ₂ O	fall or spring spring	
CAMPANULA BARBATA	78					95	dry		fall	
CAMPANULA GARGANICA	78					80	dry		fall	
CAMPIS RADICANS (See Bignonia radicans)										
CANARIUM BENGALENSE	54		56			63				

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
CANARIUM EUPHYLLUM	54		215	April		24				
CANARIUM SIKKIMENSE	54		160							
CANARIUM STRICTUM	54		88	Jan.		47				
CANNABIS SATIVA (Common hemp)	50 62		27,454				dry	none	spring	
CAPPARIS APHYLLA	54		7,840	June		92			spring	2,750
CARAGANA (Pea-shrub)	47							2 days H ₂ O		
CARAGANA ARBORESCENS (Siberian pea-tree)	3	20	16,500	July			dry		fall or early spring	
	4			June		78				
	7									
	8		15,000			75				
	12		21,840	Aug.	99		dry	H ₂ O		
	13					78				
	14					76				
	17		16,538		98					
	18		19,200							
	22									
	37	20								
	50						dry	H ₂ O	fall or spring	
	51		14,900			93				
	53		19,200	summer	99		dry		fall or spring	9,500
	74				99	60	dry	none	spring	896
	76	13	20,000	July	98	92	dry	none	spring or summer	4,837

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
CARAGANA ARBORESCENS	77	14	19,120	early summer	99	76	dry	Inoculate	spring	2,650
CARAGANA AURANTIACA	53		44,000	summer	99					
CARAGANA FRUTEX	72		21,400	summer	99					
CARAGANA GRANDIFLORA	53		89,600	summer	97		dry		spring	17,000
CARALLIA LUCIDA	54		8,960	July-Sept.		13				
CARAPA MOLUCCENSIS	54		25	July						
CAREX FESTUCACEA	71		349,230							
CAREX VULPINOIDEA	71		1,297,142							
CAREYA ARBOREA	54		1,280	Dec.-Jan.						
CARICA PAPAYA (Papaya)	46						clean and dry	stratify 100 days at 32-50°F.	immediately	
CARPENTERIA-CALIFORNICA (Carpenteria)	47 60		15,020,000	Sept.-Oct.		80		none none	spring spring	
CARPINUS (Hornbeam)	26 47			fall			dry or moist	stratify stratify	fall or spring seen as ripe or stratify fall	
CARPINUS BETULUS (European hornbeam)	50 7 8		5,545			50				
CARPINUS CAROLINIANA (Hornbeam)	26 72		30,200	fall	96			stratify	fall or spring	

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
CARPINUS FAGINEA	54		69,600							
CARPINUS JAPONICA (Japanese hornbeam)	46									
CARYA (See Hicoria)										
CASSIA ARTEMISIOIDES (Wormwood senna)	21		30,400							
CASSIA AURICULATA	54			Feb.-Mar.						
CASSIA FASCICULATA	74	17								
CASSIA FISTULA (Golden-shower)	54		2,880	Jan.-May		35				550
CASSIA GLAUCA	54			Dec.-Feb.						34 1,050
CASSIA LEPTOCARPA	17					2				
CASSIA MARGINATA	54		2,240	Feb.-May						
CASSIA MARYLANDICA	26			early fall						
CASSIA OCCIDENTALIS	54		24,000	Nov.		5			spring	
CASSIA SIAMEA	54		15,800	Mar.-Apr.		98				
CASSIA TOMENTOSA (Woolly senna)	4		20,400							14,600
CASSIA TORA	54		17,600	Nov.-Jan.		41				
CASSIA WISLIZENI	14					40				

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound.	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
CASTANEA (Chestnut)	32						moist	stratify	fall or spring	
CASTANEA DENTATA (American chestnut)	50		131			74	dry few days, then moist	stratify not too wet	spring	
CASTANEA MOLLISSIMA (Hairy chestnut)	15		75			60		stratify		20
CASTANEA PUMILA (Chinquapin)	72	90	400	fall	95					
CASTANEA SATIVA (Spanish chestnut)	8		95							
CASTANOPSIS CHRYSOPHYLLA VAR. MINER (Giant chinquapin)	60		700	Sept.		50		none		
CASTANOPSIS HYSTRIX	54		305	Sept.-Dec.		25				
CASTANOPSIS INDICA	54		88	May						
CASTANOPSIS SEMPERVIRENS (California chinquapin)	60		1,200	Sept.-Oct.		30		none		
CASTILLEJA SESSILIFLORA	71		1,540,000							
CASUARINA EQUISETIFOLIA (Horsetail tree)	54		344,000	June-Dec.						
CATALPA (Catalpa)	26						dry	none	spring	
	47							stratify	spring	

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
CATALPA BIGNONIOIDES (Common catalpa)	43 77		28, 148	Sept.		46		30 days at 60°F.		
CATALPA SPECIOSA (Western catalpa)	1 3 4	26	19,500 23,600	fall fall fall		85	50°F., dry	dry or soak		
	12 16 17 18	25	20,000 19,212			80 94 78	dry			6,500
	20 23 37 59 73	34	21,950 19,680 25,193		75		dry	none	spring	
	74 75	35 28	22,584 19,000	fall fall or winter	82	60	dry dry	none none	spring spring	1,238 3,400 1,770 1,744
CEANOTHUS (Ceanothus)	47 50				94 86		dry	stratify none	spring spring	36
CEANOTHUS AMERICANUS (Jersey-tea Ceanothus)	26 72	30	114,000	fall late	93		dry dry	none	spring fall or spring	13,500
CEANOTHUS ARBOREUS (Island myrtle)	21 60		47,700 50,000	May-June		87		hot water		
CEANOTHUS CORDULATUS (White thorn)	60		141,000	July-Sept.		65		hot H ₂ O; stratify 90 days		
CEANOTHUS CRASSIFOLIUS (Deerbrush)	21 60		33,100 65,000	May-June		45		hot H ₂ O		
CEANOTHUS CUNEATUS (Wedgeloaf hornbrush)	21 60		54,000 56,000	Apr.-June		81		hot H ₂ O		

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
CEANOTHUS CYANEUS	60		79,000	June-Aug.		55		hot H ₂ O; stratify 90 days		
CEANOTHUS DENTATUS (Cropleaf ceanothus)	60		95,000	June-July		88		hot H ₂ O; stratify 90 days		
CEANOTHUS DIVARICATUS (Wild-lilac)	21 60		75,900 73,000	July-Aug.		45		hot H ₂ O; stratify 90 days		
CEANOTHUS DIVERSIFOLIA (Trailing ceanothus)	60		84,000	June-July		61		hot H ₂ O; stratify 90 days		
CEANOTHUS FENDLERI (Fendler soribloom)	17					16				
CEANOTHUS FOLIOSUS (Wavyleaf ceanothus)	60		183,000	May-July		50		hot H ₂ O; stratify 90 days		
CEANOTHUS INCAUS (Coast white thorn)	60		92,000	May-July		88		hot H ₂ O; stratify 90 days		
CEANOTHUS INTEGERRIMUS (Deer brush)	50		58,000	June-July		71		hot H ₂ O; stratify 90 days		
CEANOTHUS JERSONII (Japan ceanothus)	60		43,000	June-July		35		hot H ₂ O 90 days		
CEANOTHUS MACROCARPUS (Big-pod ceanothus)	60		15,000	May-June		90		hot H ₂ O		
CEANOTHUS OLIGANTHUS (Hairy ceanothus)	60		73,000	May-June		62		hot H ₂ O		
CEANOTHUS PAPILLOSUM	21 60		200,200 102,600	May-June		74		hot H ₂ O; stratify 90 days		

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
CEANOTHUS PARRYI (Lady-bloom)	60		155,000	July		75		hot H ₂ O; stratify 90 days		
CEANOTHUS PARVIFOLIUS (Littleleaf ceanothus)	60		78,000			40		hot H ₂ O; stratify 90 days		
CEANOTHUS PROSTRATUS (Squawcarpet)	60		42,000	July		71		hot H ₂ O; stratify 90 days		
CEANOTHUS RIGIDUS (Rigid ceanothus)	60		72,000	May-June		77		hot H ₂ O		
CEANOTHUS SANGUINEUS (Redstem ceanothus)	77		128,000	late summer						
CEANOTHUS SOREDIATUS (Jim brush)	60		122,000	May-July		100		boil 5 min. then stratify 90 days		
CEANOTHUS SPINOSUS (Red heart)	21 60		47,700 60,000	May-June		96		hot H ₂ O; stratify 90 days		
CEANOTHUS THYRSIFLORUS (California lilac)	21 60		181,400 48,000	Apr.-July		46		hot H ₂ O		
CEANOTHUS VELUTINUS (Snowbrush)	60 77		71,000 542,076	July-Aug. late summer		68		hot H ₂ O; stratify 90 days		
CEANOTHUS VERRUCOSUS (Barranca bush)	60		72,000	Apr.-June		72		stratify 90 days or hot H ₂ O		
CEDELA FERRIFUGA	54		57,600	Apr.		61				
CEDELA MICROCARPA	54		168,000	Feb.-Mar.		80				

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
CEDRELA SERRATA	54		72,800	July-Dec.						
CEDRELA SINENSIS (Chinese cedrela)	12	33	15,000				dry			70,500
CEDRELA TOONA	54		128,160	Jan.-Aug.		51				
CEDRUS ATLANTICA (Atlas cedar)	8 51		5,909 7,100		15	15				
CEDRUS DEODARA (Deodar cedar)	8 51 52 54		3,454 3,815 4,560 4,480		89	48				2,150
CEDRUS LIBANI (Cedar of Lebanon)	8		4,548	Oct.-Nov.		72				
CELASTRUS (Bittersweet)	47 50							stratify	fall or spring	
								stratify	fall or stratify	
CELASTRUS SCANDENS (American bittersweet)	15 19 20 30 72	16 19 18	12,250 25,402 28,407 30,960	fall	88	60		stratify	full	
					90		dry		full or spring	4,800
CELTIS (Hackberry)	16 32 47 50		2,081		82		clean	none	soon as ripe	
								none	soon as ripe	
									soon as ripe	

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germin. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants to Seed
CELTIS DOUGLASI	77		3,512	fall	95		dry	stratify Nov.-Apr.	spring	600
CELTIS GEORGIANA	73	80	4,500	fall	80		dry or moist peat	depulp	fall or spring	
CELTIS LAEVIGATA (See C. mississippiensis)				Aug.-Feb.						
CELTIS MISSISSIPPIENSIS (Southern hackberry)	4									
	20	66	3,880					stratify 90-150 days	fall	
	37	57								
	58									
	59	70	5,600	fall	88	37	dry or stratify	depulp; H ₂ SO ₄	fall or spring	
	73			fall	95	80	dry	stratify Jan.-Apr.	fall or spring	
	74	75	4,242	fall	88	36	dry		stratify	
CELTIS OCCIDENTALIS (Hackberry)										
	1		2,840	fall or winter		86	dry or stratify	H ₂ SO ₄ 2 hrs.		
	2		2,029	fall or winter			dry or stratify	H ₂ SO ₄ 4 hrs.	fall or spring	
	3			fall or winter				stratify		
	4	40	4,500	fall or winter	96					
	9		1,574		93					
	11		1,829 (with flesh)		96					
	19									
	20	10						stratify 70-160 days	fall or spring	
	22		3,725							
	23									
	35									
	37	74	1,856					H ₂ SO ₄ 2 hrs.		
	50				99					
	59				89	50				

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. G-rm. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
CELTIS OCCIDENTALIS (Continued)	72	40	5,410	fall	92		stratify 60 days	spring	
	74	72	2,107	fall and winter	67	dry	stratify	fall or stratify	283
	76	51	1,900	fall	87	dry	stratify at 41°F.	fall or spring	266
CELTIS PALLIDA (Sperry hackberry)	17				48		none	early spring	
	75		18,205	Nov.		dry	none	May	
CELTIS RETICULATA (Thick-leaved hackberry)	17				70			early spring	
	75	80	5,255	late fall		dry	none or stratify	fall or spring	415
	77		4,000		98	dry	stratify Nov.-Apr.	spring	
CELTIS TETRANDA	54		72,000	Aug.-Sept.	39				
CEPHALANTHUS (Buttonbush)	26			fall or winter		moist or dry		fall or spring	
	47						stratify	fall or spring	
CEPHALOTAXUS (Plum-yew)	26			early fall			stratify	second fall	
	47						stratify	spring	
CERATONIA SILIQUA (Carob)	8		2,538		37				
	14						H ₂ O 3 days		
	50						H ₂ O		20
	73		2,650	fall	80	dry	stratify	spring	
CERCIDIPHYLLUM	47								
CERCIDIPHYLLUM JAPONICUM (Katsura-tree)	8		668,181				stratify 90-120 days at 32-50°F.		
	46					dry			

[illegible]

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to plant	Table Plants Lb. Seed
CERCOCARPUS PARVIFOLIUS (valley mahogany)	9 13 14 17 77		42,000		32	3 32 45				
CERCOCARPUS SP.	76	22		summer	78		dry			
CERIOPS CANDOLLEANA	54		144(fruit)							
CHAENACTIS ARTEMISIAEFOLIA	60		980,000	June		32		none		
CHAENACTIS GLABRUSCULA	60		1,206,000	May-June		56		none		
CHAMAECRISTA PASCICULATA (Partridge pea)	26 72		42,300	summer fall			dry dry	H ₂ O scarify	spring spring	
CHAMAECRISTA NICTITANS	73		94,000	fall			dry	scarify	spring	
CHAMAECYPARIS ALUMNI	77	14	230,400	Sept.	3		dry		spring	
CHAMAECYPARIS LAWSONIANA (Port Oxford cedar)	1 8 22 22 26 51 54 65 77	(1935)	129,414 245,681 204,800 108,700 200,000 275,200 200,000 156,000			40				
CHAMAECYPARIS NODULATENSIS (Alaska cedar)	8 54	19	115,587 116,400	fall	55 39	40 18 40	dry dry	none	spring spring	

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usabl. Plant Lb. Seed
CHAMAECYPARIS OBTUSA (Hinoki cypress)	1 8 51 54		243,326 187,727 204,250 244,800		23	9 22				
CHAMAECYPARIS PISIFERA (Seward retinospora)	8 51		500,000 590,000		9	7			spring	
CHAMAECYPARIS THYOIDES (Southern white cedar)	1 12	10	460,000			88				
CHENOPODIUM ALBUM	71		648,571							
CHENOPODIUM AMBROIOIDES	54 60		4,280,000 4,480,000	Sept.-Nov.		34		none		
CHENOPODIUM BERLANDIERI	71		744,262							
CHENOPODIUM GIGANTOSPERMUM	71		454,000							
CHENOPODIUM HYBRIDUM (See C. gigantospermum)										
CHENOPODIUM LEPTOPHYLLUM	71		1,194,736							
CHENOPODIUM ORBICULIFOLIUM	17					0				
CHENOPODIUM QUINTOA (Quinea)	75							none	early spring	
CHENOPODIUM RUBRUM	71		7,566,666				dry			
CHENOPODIUM STANTLEYANUM	71		648,571							
CHICKRASSIA TABULARIS	54		44,960	Jan. Mar.		35				
CHILOPSIS LINEARIS (Desertwillow)	3 4		92,000	fall-winter fall-winter			50° dry		spring	

Name	Re. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
CHILOPSIS LINEARIS (Continued)	13 16 17 37 75		42,325 116,177 40,224		94 75	100 79 68 38		none	spring	2,400
CHIONANTHUS (Fringetree)	47 50							stratify stratify	spring fall or stratify	
CHIONANTHUS VIRGINICA (Fringetree)	12 26 53	33 34	2,000 1,100	Aug. fall	97 99			stratify stratify	Nov. fall or spring	
CHLOROXYLON SWIETENIA	54		28,160	Mar.-Aug.		37				19,575
CHRYSANTHEMUM LEUCANTHEMUM	71		2,063,630							
CHRYSOPSIS VILLOSA	60		403,000	July-Sept.		14		none		
CICUTA MACULATA	71		313,103 (Mericarps)							
CINNAMOMUM CAMPHORA (Camphor tree)	54		2,720	Sept.-Dec.						2,300
CINNAMOMUM CECIDOPHNE	54		1,115	Aug.-Nov.		21				
CIRSIIUM ARVENSE	71		288,253							
CIRSIIUM MEGACEPHALUM	71		53,727							
CISSUS AMPELOPSIS (Heartleaf ameplopsis)	12 26	20	9,600	Oct. fall	90			stratify stratify or dry	fall or spring	

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
CISTUS (Rockrose)	47						none	spring	
CITRULLUS VULGARIS (Watermelon)	17				66	dry	none	Apr.-May	
CITRUS	47						stratify or soak dry seed	soon as ripe	
CLADRASTIS (Yellow-wood)	50					dry	none	spring	
CLADRASTIS LUTEA (Yellow-wood)							stratify	fall or spring	
CLARKIA ELEGANS	60		2,225,000	May-June	14		none		2,250
CLEISTANTHUS COLLITUS	54		4,000	Mar-Apr.					
CLEMATIS (Clematis)	26			fall		must not dry	stratify at once	fall or stratify	
	47						none	spring	
	50						stratify soon as ripe	spring	
CLEMATIS DRUMMONDI (Drummond clematis)	17				78				
CLEMATIS FLAMMULA (Plume clematis)	8		24,545						
CLEMATIS LASIANTHA (Pipe-stem clematis)	21		103,000						
	60		184,000	June-Sept.	58		none		

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants lb. Seed
CLEMATIS LIGUSTICIFOLIA (Western virginiana bower)	13 17 60 77		93,000 329,150	June-Sept. fall	11 84 21 45	dry	none deawn	spring	
CLEMATIS PAUCIFLORA (Rope vine)	60		85,000	May-July	36		none		
CLEMATIS VITICELIA (Italian clematis)	8		327,000						
CLEOME SERRULATA (Rocky Mountain bee-plant)	71		73,521						
CLERODENDRON	47						none	soon as ripe	
CLERODENDRON INFORTUNATUM	54		8,800	May-June	19				
CLERODENDRON SQUAMATUL.	54		8,160						
CLETHRA (Clethra)	47						none	winter or spring under glass	
CLETHRA ALNIFOLIA (Summersweet)	26			fall			stratify	fall or stratify	
COCULUS CAROLINUS (Carolina moonseed)	73					dry		winter	2,000
COCHLOSPERMUM GOSYPIUM	54		4,320		8				
COLEBROCKEA OPPOSITIFOLIA	54		8,800	May					

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
COLESANTHUS SQUAMULOSUS	(See Brickellia squamulosa)									
COLLIOMIA LINEARIS	71		605,333							
COLUTEA (Bladder-senna)	47							H ₂ O	fall or spring	
COLUTEA ARBORESCENS (Bladder-senna)	38		25,000	fall				H ₂ SO ₄ 15 min.		
	17		270,454							
	72		55,280	fall		10	dry			5,080
COMAROSTAPHYLOS DIVERSIFOLIA (Comarostaphylos)	21		16,300							
CONRINGIA ORIENTALIS	71		211,162							
CONVOLVULUS REPENS	71		14,934							
CORDIA FRAGRANTISSIMA	54		800							
CORDIA MYXA	54		2,480	July-Aug.						
CORDIA VESTITA	54		1,280							
COREOPSIS BIGELOVI	60		310,400			5		none		640
COREOPSIS DOUGLASI	60		704,500	June		39		none		
COREOPSIS TINCTORIA	71		5,044,444							
CORISPERMUM EMARGINATUM	71		238,947							
CORISPERMUM NITIDUM	71		349,230							
CORISPERMUM VILLOSUM	71		342,641							

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
CORNUS (Dogwood)	16		12,937	soon as ripe	89		Must not dry	stratify	soon as ripe	
	26			soon as ripe			tight, dry if not planted immediately	none or stratify 85 days at 40° F.	immediately or stratify	
	36									
CORNUS ALTERNIFOLIA (Pagoda dogwood)	53		5,856							
	72		7,900	fall	86					
	15	17	3,744	summer	60		moist or dry	stratify	fall or stratify	
CORNUS AMOMUM (Silky dogwood)	19									
	26									
	53	18	19,886	fall	96		sand and peat			
CORNUS ASPERIFOLIA (Roughleaf dogwood)	72		11,570		74					
	3	18	18,700	summer				stratify 120 days at 41° F.	spring	3,816
	37		8,546					stratify 130 days at 41° F.	fall or spring	
CORNUS CANADENSIS (Bunchberry)	59	27	15,576	Sept. summer-fall	85	60		stratify 60 days		
	74			fall			dry	stratify Dec.-Mar.	Mar.	
	72									
CORNUS CIRGINATA (Round-leaved cornel)	72		22,200	late summer	99					
	1		4,180							
	2	46	4,800	July-Dec.				stratify 120 days at 41° F.	fall or spring	
CORNUS FLORIDA (Flowering dogwood)	3							stratify at 40° F.	Nov.	
	12	40	4,000	Oct.	90					

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
CORNUS FLORIDA (Continued)	15	33	3,647	Oct.		70	clean, dry	stratify		
	37							stratify 100-130 days at 32-50°F.		
	46					85	clean, dry	stratify 120 days at 33-45°F.		
	48					18	acid peat	stratify 120 days at 41°F.		780
	58	22	3,500	fall	94			stratify - depulp	winter-spring	
CORNUS KOUSA (Kousa dogwood)	72	40	5,088	fall	74					
	73	40								
CORNUS KOUZA (Kousa dogwood)	46						clean, dry	stratify 120 days at 32-50°F.		
CORNUS MAS (Cornelian cherry)	7				90			stratify at 40°F.		
	12		2,000	Aug.	94		clean, dry	stratify 120 days at 41-50°F.		
	46						dry	germ. 2nd yr.	spring	1,300
CORNUS NUTTALLI (Western dogwood)	72		2,020	fall	99		clean, dry	stratify 140 days at 30-50°F.		
	46						clean, dry	stratify 120-150 days at 38°F.		
	48							treat stored seed with sulphuric acid 4 hrs. & stratify 90 days		
	60		3,000	Sept.-Oct.		100				
CORNUS OBLIQUA (Pale dogwood)	74	8								
CORNUS OCCIDENTALIS (Western osier)	77	15	15,750		94	38	dry	stratify		
CORNUS OFFICINALIS (Japanese cornelian-cherry)	46						dry-clean	stratify 300 days at 41-50°F.		

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
CORNUS PANICULATA (Gray dogwood)	2	25	15,270	June-Sept.				stratify		
	15							stratify 120 days	fall or	
	19		10,160		75			or more	stratify	
	20		10,410	late fall	96					
	53	18	12,800							
CORNUS RACEMOSA (See C. paniculata)	72									
CORNUS STOLONIFERA (Red osier)	13					6				
	18		17,300		80					
	19	16								
	20							stratify 160 days	fall or	
	46						clean, dry	or more	stratify	
CORONILLA EMERUS (Scorpion-senna)	72	15	13,800	fall	93			stratify 290 days	spring	
	77	15	21,824	late summer		75	dry	at 41-50°F.		
								stratify 113 days	spring	
								stratify 155 days	spring	
								at 40°F.		2,979
CORYLOPSIS (Winterhazel)	53	16	93,950	July	97					
	47							stratify	spring	
	50						dry		spring under glass	
CORYLOPSIS VEITCHIANA (Veitch winterhazel)	53	19	32,300	Sept.	98					
CORYLUS (Hazelnut; filbert)	47						moist	stratify	fall or	
	50							stratify	spring	

Name	Ref. No.	Lb. Seed 100 lb. fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants lb. Seed
CORYLUS AMERICANA (Hazelnut)	2		300	summer			stratify		
	19	28	640				stratify 120 days or more	fall or stratify	
	20		520						
CORYLUS AVELLANA (Filbert)	55	29	416	fall	92		mulch	soon as ripe	55
	8		454						
	19		176	fall	93				
CORYLUS CALIFORNICA (California hazelnut)	60		400	Sept-Oct	20		stratify 90 days in peat moss		
CORYLUS COLUMBICA (Tree hazelnut)	54		560	Oct. fall					
	72								
CORYLUS MAXIMA (Giant filbert)	7				85				50
CORYLUS ROSTRATA	72		425	fall	80		stratify		
COTINUS COGGYGRIA (Smoke-tree)	26			summer		moist			
	53		47,700						
	72		33,800	July	70				
COTONEASTER (Cotoneaster)	18		19,450		95	clean, dry	stratify 60-75°F. for 90-120 days, then at 34-41°F. for 90-120 days or 90-150 min. H ₂ SO ₄ in place of 60-75°F. treatment.	fall, germination second spring	
	46								
	50						stratify	fall or stratify	

[illegible]

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable plants Lb. Seed
CRATAEGUS (Continued) (Hawthorn)	46					moist	clean and remove carpels; stratify up to 1 yr. at 41-50°F.		
	58				58		stratify at low temperature. Some species also require pre-treatment at high temperature.		
	70						stratify 60 days at 75°F.; then at 41°F.		
CRATAEGUS ARNOLDIANA	70						stratify 60 days at 75°F.; then at 41°F.		
CRATAEGUS BREVISPIUM (See C. douglasii)									
CRATAEGUS CARRIERI	70						stratify 60 days at 75°F.; then at 41°F.		
CRATAEGUS COCCINEA (Thicket hawthorn)	53	8	10,384	late fall			stratify 120 days at 41°F.		
	70						stratify 120 days at 41°F.		
CRATAEGUS COLUMBIANA	77	5	37,300	late summer		dry	stratify Nov.-Apr.	spring	
CRATAEGUS CORBATA	70						stratify 120 days at 41°F.		
	72		29,760	late fall	70		scarify and stratify 90 days at 41°F.	spring (germinates first year)	
CRATAEGUS CRUS-GALLI (Cockspur thorn)	2						stratify 120 days at 70°F. (or less if pre-treated with H ₂ SO ₄), then stratify at 41°F.	summer unless specially treated	
	70								

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
CRATAEGUS DOUGLASSI (Western thorn apple)	22 77	14	23,000 21,535	summer				stratify Nov.-Apr. stratify 120 days at 70°F. or less time if pre-treated H ₂ SO ₄ ; then stratify at 41°F.	spring	200
CRATAEGUS FLAVA	70							stratify		
CRATAEGUS MACRACANTHA (Spike hawthorn)	15		20,600	fall				stratify		342
CRATAEGUS MOLLIS	70							stratify 60 days at 75°F. then at 41°F.		
CRATAEGUS MONOGYNA (English hawthorn)	7 15 53 72		8,120 5,600 6,500	fall fall	91 90 95			stratify		
CRATAEGUS MONOGYNA STRICTA	72		6,700	fall	98		acid peat	stratify alternating temperature 2 yrs.	spring	320
CRATAEGUS OXYACANTHA (English hawthorn)	7 54 70		1,440		35	10		stratify at 41°F. preceded by either 90 days stratification at 77°F. or 3 hrs. H ₂ SO ₄ plus 21 days at 77°F.		
CRATAEGUS PEDICELLATA	72		4,670	late fall	53					
CRATAEGUS PHAENOPYRUM	(See	C. cordata)								

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants lb. Seed
CRATAEGUS PUNCTATA	70					0		stratify 120 days at 70°F. (or less if pre-treated with H ₂ SO ₄), then stratify at 41°F.	summer unless specially treated	
CRATAEGUS RIVULARIS (River hawthorn)	17									
CRATAEGUS ROTUNDIFOLIA	70							stratify 120 days at 70°F. (or less if pre-treated with H ₂ SO ₄), then stratify at 41°F.	summer unless specially treated	
CRATAEGUS SALICNA	13					7				
CRATAEGUS SANGUINEA	7 70				35					
CRATAEGUS SPATHULATA	73	12	5,500				moist peat	stratify 60 days at 75°F., then at 41°F.	fall or spring	
CRATAEGUS TOMENTOSA	70							stratify 60 days at 75°F., then at 41°F.		
CRATAEVA RELIGIOSA	54		10,240	July-Sept.		7		stratify 60 days at 75°F., then at 41°F.		
CROSSOSOMA CALIFORNICUM	60			May-July		24		none		
CROTALARIA INTERMEDIA	60 62		87,000 96,000			54		stratify 90 days		
CROTALARIA JUNCSEA	54		10,880	Dec.-Apr.		25				
CROTALARIA MOLLIS	54		8,320							

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Cloacn Seeds per Pound	Time to Collect	Cutt. Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
CUPRESSUS LUSITANICA (Portuguese cypress)	54		95,200							
CUPRESSUS MACNABIANA (Macnab cypress)	51		79,500			3				
CUPRESSUS MACROCARPA (Montorey cypress)	1 46 51 52 65		94,968 59,250 60,960 60,000		23	16 33 16	dry	60 days at 32-50°F.		
CUPRESSUS SEMPERVIRENS (Italian cypress)	8 43 54		62,863 92,400	Feb.-Mar.		40		none		
CUPRESSUS TORULOSA (Bhutan cypress)	54		92,800	Apr.-Nov.						
CUSCUTA ARVENSI	71		585,806							
CUSCUTA CEPHALANTHI	71		363,200							
CUSCUTA CORYLI	71		201,777							
CYCLOLOMA ATRIPLICIFOLIUM (Winged pigweed)	71		288,909							
CYDONIA (Quince)	47 50 7				85			stratify	fall or spring	
CYDONIA VULGARIS (Common quince)								stratify	spring	
CYPERUS FLANDRUS	71		3,783,353							
CYPERUS ESCULENTUS	71		4,540,000							

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
CYPERUS SCHWEINITZII	71		324,285							
CYTISUS (Broom)	47 50						dry	H ₂ O none	spring spring	
CYTISUS DECUMBENS	78					80	dry	H ₂ SO ₄	fall	
CYTISUS SCOPARIUS (Scotch broom)	12 22 (1935)	16	65,000 44,000	June-July	95		dry	scarify		16,000
	22		32,000							
	51		55,360							
	53		59,900							
	58				61					
	60		68,000	July-Sept.		44		scarify or hot H ₂ O		
	72	17	61,300	summer	73					360
	73	17	57,500	spring	80		dry	scarify	second spring spring	3,850
	77	22	40,578	summer	96	45	dry			

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
DALBERGIA CULTRATA	54		5,600	Dec.-Feb.						8,400
DALBERGIA LATIFOLIA	54		12,320	Jan.-May		61				100
DALBERGIA OLIVERI	54			Feb.-Mar.						
DALBERGIA PANICULATA	54		2,380	Jan.-Mar.						
DALBERGIA SISSOO (Sissoo)	54		24,000	Nov.-Mar.		93				3,100
DAPHNE (Daphne)	47							stratify	fall or spring soon as ripe	
	50							stratify		
DAPHNE MEZEREUM (February daphne)	53		10,900							
	72	11	12,300	early fall	99		dry	mulch	fall	1,000
Daucus CAROTA (carrot)	62		405,000							
	63		408,160							
DAVIDIA INVOLUCRATA (Dovetree)	26									
DEHALLIA CUNEATA	54		160	Jan.-Feb.		90		file coat and soak	fall or spring	
DENDROCALAMUS (Giant bamboo)	54		5,920							
DENDROCALAMUS LONGISPATUS	54		68,800	Mar.						
DENDROCALAMUS MEMBRANACEUS	54		16,000							
DENDROCALAMUS STRICTUS (Male bamboo)	54		16,960	Mar.-June		50				4,950

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
DENDROMECON RIGIDA (Bush poppy)	60		68,000	July-Sept.	44		scarify or hot H ₂ O		
DERRIS ROBUSTA	54		48,000	Mar.					
DESIANTHUS ILLINOIENSIS	14				84		H ₂ SO ₄ 1 hr.		
DESIANTHUS VIRGATUS	54		128,000		5				
DESMODIUM (Tickclover)	26			summer and fall			stratify	spring	
DESMODIUM GANGETICUM	47						stratify	spring	
DESMODIUM TORTUOSUM (Beggartweed)	54		572,800	Nov.	22				
DESMODIUM TRIFOLIUM	62		194,000						
DESMODIUM TRIFOLIUM	54		630,400	Nov.					
DEUTZIA (Deutzia)	47						none	spring (under glass)	
DICENTRA CHRYSANTHA (Golden ceardrops)	60		400,000	May-July	0				
DICHOSTACHYS CINEREA	54		28,800						1,750
DIERVILLA (Bush-honeysuckle)	47						none	spring (under glass)	
DIGITALIS PURPUREA (Foxglove)	50						none		
DIGITALIS PURPUREA (Foxglove)	60		4,000,000	Aug.	66	dry	none		
DILLENNIA INDICA (Indian dillenia)	54		24,000	Feb.					

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
DILLENNIA PENTAGYNA	54		21,920	May						
DIOSPYROS ASSIMILIS	54		120	Sept.		33				
DIOSPYROS CHLOROXYLON	54		2,880	Jan.-Apr.						
DIOSPYROS EBENUM	54		4,160	Sept.-Oct.		81				
DIOSPYROS EMBRYOPTERIS	54		352	May-Aug.		12				
DIOSPYROS MELANOXYLON	54		480	Apr.-June						290
DIOSPYROS MONTANA (Mountain persimmon)	54		592	Jan.						
DIOSPYROS TOMENTOSA	54		528	Apr.-June		89				
DIOSPYROS VIRGINIANA (Persimmon)	12 15 19 20	33 10	1,000	Oct.		80		stratify stratify		250
	32							stratify 40-120 days	fall or stratify fall or winter	50
	37 58 73 74	16 30 16	1,764 665	fall	99	90	clean, moist	stratify		
DIPLACUS AURANTIACUS (Bush monkey-flower)	60		16,000,000	July-Sept.		56	moist	stratify	spring	
DIPLACUS LONGIFLORUS	60		9,343,000	May-July		46		none		
DIPLACUS PARVIFLORUS	60		9,500,000	June-Aug.		82		none		
DIPLACUS PUNICEUS (Ho bush monkey-flower)	60		13,000,000	May-June		35		none		

Name	Ref. lc.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
DIPTEROCARPUS ALATUS	54		58 (fruit)	Apr-May		27				
DIPTEROCARPUS COSTATUS	54		190 (fruit)	Mar-May		35				
DIPTEROCARPUS GRIFFITHI	54		20 (fruit)							
DIPTEROCARPUS INDICUS (See D. turbinatus)										
DIPTEROCARPUS MACROCARPUS (See D. pilosus)										
DIPTEROCARPUS PILSUS	54		56	Jan-Feb - May		50				
DIPTEROCARPUS TUBERCULATUS	54		70 (fruit)	May		83				
DIPTEROCARPUS TURBINATUS	54		74	May-June		62				
DODONAEA ARIZONICA (Hortush)	17					44	dry	none	spring	25
DODONAEA VISCOSA	17					2				
	54		51,200	Apr-May		36				
	75		20,377	June			dry	none	April	
DOLICHANDRONE (Macfadeyna)	54		9,440			38				
DOLICHANDRONE FALCATA	54		6,400			27				
DRABA AIZOIDES	78					90	dry		fall	
DRACOPHEALUM PARVIFLORUM	71		172,952 (Nutlets)							
ERYMOCALLIS ARGUTA	71		2,837,500							
DUARANGA CONNER-TIOIDES	54		11,376,000	Apr-May		28				30,575

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Found	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
DURANTA PLUMIERI (Golden dewdrop)	54		6,400	July-Sept.						130
DYSOXYLUM PEDDOMEI	54					76				
DYSOXYLUM LINEARIFERUM	54		68							
DYSOXYLUM MALABARICUM	54		55	July-Aug.		85				47

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
LECHININOCARPUS ASSAMICUS	24		3,520	June-Dec.		18				8,750
ELRETIA ACUMINATA (Peltotrope tree)	54									
ELRETIA LAEVIS	54		66,000	Jan-Apr.						
ELAEAGNUS (Elaeagnus)	47							stratify	fall or spring plant	
	50							stratify 1 year	second spring	
ELAEAGNUS ANGUSTIFOLIA (Russian olive)	2		3,225	Sept.			dry	90 days at 41°F.	fall or spring	
	3		2,500 (with pulp)	fall				stratify; depulp	fall or spring	
	7				85					9
	9		2,705		99					
	11		2,912		91					
	12		2,000		99			stratify		
	16		4,282		95					
	17		1,936			24			fall or spring	
	18		3,100							
	22		(with pulp)							
	35					7		depulp; stratify		
	37	14	1,846							500
	53	84	2,300		87			stratify over winter	spring	178
	59				74					227
	74	23	4,245	fall	95	63	dry	stratify, Dec.-Mar.	Mar.	840
	75	80 (dry fruit)		fall	93		dry	none or stratify	fall or winter	
	76	62	3,000	fall	88	79	dry	stratify at 41°F.	fall or spring	289
	77	33	2,940	fall	95		dry	stratify 110 days at 40°F.	spring	250

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pounds	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
ELAEAGNUS ARGENTEA (Silverberry)	18		2,004 (with pulp) 3,635 3,800	clean Sept.	90					
ELAEAGNUS MULTIFLORA (Gumi)	53	2	16,600	July	99		sand and peat	stratify over winter	spring	1,000
ELAEAGNUS P. NGENS (Thorny elaeagnus)	12	20	3,750	spring	99			stratify	spring or fall	
	15	20						stratify		
ELAEAGNUS UMBELLATA (Autumn elaeagnus)	12		16,800		95			stratify		
	15		16,800	Oct. early summer	95			depulp		
	73	10								180 86
ELAEODENDRON GLAUCUM	54		1,760	Feb.-June						
ELEOCHARIS CALVA (Spike rush)	6			Aug.		6		210 days H ₂ O at 35 F.		
ELEOCHARIS PALUSTRIS	71		908,000							
ERMENANTHE PENDULIFLORA (Whispering belle)	60		1,400,000	June-July		14		none		
ENCELLA ACTONI (Acton encelia)	60		348,000	May-June		32		none		
ENCELLA CALIFORNICA (California encelia)	60		327,000	May-June		28		none		
ENCELLA PARINOSA (White brittlebush)	60		570,000	May-July		20		none		
ENCHYLAENA TOMENTOSA	75			fall and winter			dry	none	Apr.	

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
ENGELHARDTIA COLEBROOKIANA	54		14,720	May-June		14				
ENGELHARDTIA SPICATA	54		14,400							
ENKIANTHUS (Enkianthus)	47						dry	none	winter or spring (under glass) spring	
	50						dry	none		
ENTEROLOBIUM SAMAN (See Fithecollobium saman)										
EPHEDRA DISTACHYA	75			Aug.			dry	none	Mar.	
EPHEDRA GERARDIANA (See E. distachya)										
EPHEDRA NEVADENSIS (Nevada jointfir)	17					0				
EPHEDRA SINICA (Chinese jointfir)	17					52	dry	none	spring and summer spring	
	75		60,242	June	90	52	dry	none		24,000
EPHEDRA TRIFURCA (Three pronged jointfir)	17					34				
EPIGAEA REPENS (Trailing arbutus)	47						dry	none	winter or spring (under glass) soon as ripe (under glass)	
	50			soon as ripe			clean			
EPILOBIUM CALIFORNICUM	60		1,633,000	May-Aug.		95		none		

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
ERIOBOTRYA JAPONICA (Loquat)	50			Nov.-Dec		50		stratify		6,400
ERIOBOTRYA PETIOLATA	4		180							
ERIODENDRON ANFRACTUOSUM	54		7,200	Mar.-Apr.						
ERIOGONUM FASCICULATUM (California buckwheat-brush)	17 21 60		238,700 493,000	June-Aug.		20 46		none		
ERIOGONUM GIGANTEUM	60		899,000	June-July		47		none		
ERIOGONUM LATIFOLIUM	60		504,000	July-Sept		24		none		
ERIOGONUM POLIFOLIUM (See E. fasciculatum)										
ERIOGONUM UMBELATUM	13				25					
ERIOGONUM WRIGHTI (Wright's buckwheat-brush)	17			Sept.		50	dry	none	summer	
ERIOPHYLLUM CONFERTIFLORUM (Golden yarrow)	60		2,600,000	May-Sept.		21		none		
ERODIUM CICUTARIUM (Alfileria)	17 64			spring		58	dry		early fall	
ERODIUM TEXANUM	64			late spring		16	dry		early fall	
ERUCASTRUM POLLICHII	71		1,107,317							
ERYSIMUM ASPERUM (Western wall flower)	60 71		373,000 1,008,888	June-Aug.		84		none		
ERYSIMUM CHEIRANTHOIDES	71		3,632,000							

Name	Ref. No.	Lb. Seed 100 lb. fruit	No. Clean Seeds per Found	Time to Collect	Cutt Test	Germ Test	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
ERYSIUM PARVIFLORUM	71		2,522,222							1,800
ERYTHRINA SUBEROSA	54		8,650			82				
ERYTHROXYLUM MONOCYNUM	54		16,000	Jan.-Feb.		2				320
ESCHSCHOLTZIA CALIFORNICA (California poppy)	60		540,000	Apr.-July		49		none none		
ESCHSCHOLTZIA CALIFORNICA IC. ALBA	17					46				
EUCALYPTUS (Gun-tree)	47 50			soon as ripe			dry	none none none none	summer spring	
EUCALYPTUS CINEREA	54		3,968,000			1				69
EUCALYPTUS CITRIODORA (Lemon-scented gum)	54		70,400			70				
EUCALYPTUS GLOBULUS (Blue gum)	54		160,000	Mar.-May		80				25,000
EUCALYPTUS NAUDINIANA	54					460 per oz.				
EUGENIA CYMOSA	54		4,800	Apr.-May		15				
EUGENIA GARDNERI	54		2,040			4				
EUGENIA GRANDIS	54		83	May-June		90				71
EUGENIA GRATA	54		2,400	Apr.-May		3				
EUGENIA JAMBOLANA (Jambolan plum)	54		544	May-Aug.		55				290
EUGENIA OPERCULATA	54		320	June-July		84				770

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
EUGENIA UTILIS	54		1,760							
EUPATORIUM PERFOLIATUM	71		2,670,580							
EUTHOREIA HUMISTRATA	71		1,891,666							
EUPHORBIA ESUIA	71		129,714							
EUPHORBIA NUTANS	71		810,714							
EUPHORBIA SERPYLLIFOLIA	71		1,513,333							
EUROTIA LANATA (Winter-fat)	13 14 17 77		54,400	late summer		81 86 72		clean		
EURYOIS MULTIFIDUS	75			spring			dry	none	immediately	
EVODIA FRAXINIFOLIA	54		43,200							
EVODIA MELLAEFOLIA	54		35,200	Nov.		29				
EVONYMUS (Evonymus)	47 50							stratify Stratify	spring spring	
EVONYMUS ALATA (Winged evonymus)	46						clean, dry	stratify 90-100 days at 32-50°F.		
EVONYMUS AMERICANUS (Strawberry bush)	12 72	16 17	30,000 30,000	Sept. fall	99 98 98			stratify		
EVONYMUS ATROPURPUREUS (Burning bush)	15 36	10 22	40,000 (2,025 berries)	Oct.	94	70		stratify		8,000

Name	Ref. No.	Lb. Seed 100 lb. fruit	No. Clean Seeds per Pound	Time to Collect	Outt. Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
EVONYMUS FUNGEANA (Winterberry; yonymus)	15		13,540	Oct.				stratify	fall	1,500
EVONYMUS EUROPAEUS (European burning bush)	7				98		clean and dry	stratify 90-120 days at 32-50°F. mulch		
EVONYMUS OXYPHYLLA	72		8,770	fall	99				soon as ripe	2,200
EVONYMUS RADICANS VEGETA (Higleaf wintercreeper)	46		13,180	early fall	99		clean, dry	stratify 90-100 days at 32-50°F.		
EVONYMUS VERRUCOSA	7				99					
EVONYMUS YEDCENSIS	72			fall			dry	mulch	fall	1,100
EXCOECARIA GALLOCHA	54		4,000	Aug.-Sept.						
EXCOFCORDA (Pearlbush)	26							stratify	fall or spring	
EXCOCHORDA GRANDIFLORA (Pearlbush)	46						clean and dry	stratify 50 days at 32-50°F.		
	72			Sept.						

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
FAGOPYRUM ESCULENTUM (Buckwheat)	62 63		20,000 20,400							
FAGRAEA FRAGENS	54		7,680 (fruits)							
FAGUS (Beech)	47 50							stratify stratify	fall or spring soon as ripe or stratify	
FAGUS AMERICANA (See F. grandifolia)										
FAGUS GRANDIFOLIA (Beech)	1 2 12 19 32	100 25	1,440 1,800	fall Oct.		81 80	moist		fall	200
				soon as ripe			must not dry	stratify	Mar. (under shade)	
	72 73		2,000	fall fall	95		moist; must not dry		immed- iately	
FAGUS SYLVATICA (European beech)	7 8 54 72		2,000 2,400			45 7				
FALLUGIA PARADOXA (Apache-Plume)	13 17 60 75		420,000 420,000	June-July early summer		62 58 42		stratify none none	spring spring	4,200
FENDLERIA RUPICOLA	13					6				
FIQUS BENGALENSIS (Banyan tree)	54		384	Apr.-May Oct.-Nov.						

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
FICUS ELASTICA (India rubber tree)	54		320 (fruits)	May-Dec.					
FICUS GLOMERATA (Cluster fig)	54		272	Mar.-Apr. July-Aug.					
FICUS INFECTORIA (Dotted fig)	54		5,600 (fruits)	May-June & Oct.					
FICUS RELIGIOSA (Sacred Bo tree)	54		2,080	Apr.-May Oct.-Nov.					
FICUS RETUSA	54		4,640 (fruits)	Feb.-Apr.					
FICUS ROXBURGHII	54		1,552,000	Sept.					
FILICUM DECIFOLIENS	54		1,440		25				
FLEMINGIA CONGESTA	54		25,600	Jan.					
FORESTIERA NEOMEXICANA (Palo blanco)	13 14 17 75	19		summer	55 72 68		stratify 30 days none	spring fall or spring spring spring	4,170
FOTHERGILLIA (Witchalder)	47 50				82	dry	stratify none		
FRAXINUS (Ash)	16 47		16,345		55	dry	stratify or sow as soon as ripe		

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
FRAXINUS AMERICANA (White ash)	1		0,240			80				
	7		6,000			50				
	12		4,022			80				
	15		6,000		44			stratify		
	19	53	11,172	fall						
	20		10,200			42				
	23		15,360							
	52	96			54	66		stratify 140 days at 30-60°F.	early fall or	
	58							stratify 190 days alternating temperature	stratify soon as ripe	
	67						dry			
FRAXINUS ANOMALA (Single-leaf ash)	72	69	6,450	fall	85					3,120
	73			fall						
	77		8,480		79			stratify or H ₂ O	immediately spring	74
	13		22,050			0				
FRAXINUS CAMPESTRIS	18									
	3	75	16,750	fall or winter			dry	stratify 10-20 days	fall or spring	
FRAXINUS CUSPIDATA (Flowering ash)	17					28				
	14					18				
FRAXINUS DIPETALA (California shrub ash)	60		8,000	July-Sept		56		stratify 90 days		
FRAXINUS EXCELSIOR (European ash)	8		6,500							
	7									
	54		4,000 (fruits)			55				
FRAXINUS FLORIBUNDA	54		4,000 (fruits)							

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean seeds per Found	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
FRAXINUS LANCEOLATA (Sec. F.		pennsylvanica)								
FRAXINUS MANDSIEURICA (Mancurian ash)	54		4,960 (fruits)							
FRAXINUS MICROANTHA	54		3,360	Nov.						
FRAXINUS NIGRA (Black ash)	1 27		2,760				moist	68°F. 60 days then 41-50°F. 60-90 days		
FRAXINUS OREGONA (Oregon ash)	60		10,000	Aug-Sept.		54		stratify 90 days		
FRAXINUS ORNUS (Flowering ash)	46						dry, cool	stratify 90 days at 32-38°F.		
FRAXINUS OXYPHYLLA	54		4,000 (fruits)			16				
FRAXINUS PENNSYLVANICA (Red ash)	1 67		11,950 7,400			49		stratify 160 days at 36°F.	fall or stratify	

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants lb. Seed
FRAXINUS PENNSYLVANICA LANCEOLATA (Green ash)	1		16,000	fall		45	dry	60 days at 41° F. stratify 90 days at 41° F.		
	2		17,250							
	5				90	80				
	8		13,590		82					
	9		17,800							
	17				65			stratify 45-60 days	winter or spring	
	18		17,623					stratify	fall or spring	
	19	98								
	20							stratify 30 days	spring	
	26				85					
	28							none		100
	37	62	15,514	fall			cool, moist	H ₂ O 2-10 days	fall or spring	170
FRAXINUS PUBESCENS (See F. pennsylvanica lanceolata)	73	80	16,000	fall	76	67	dry		spring	880
	74	61	21,521					none	early spring	800
	75	50		late summer	55				fall or spring	1228
	76		17,550	fall	89	82	dry	stratify Nov-Mar.	spring	
	77		15,200	fall	84	90	dry	stratify or H ₂ O	spring	
FRAXINUS QUADRANGULATA (Blue ash)	1		7,000							
FRAXINUS SYRIACA (See F. oxphylla)										
FRAXINUS VELUTINA (Velvet ash)	21		40,500	May-June		60		stratify 90 days		
	60		20,000							
FRAXINUS VELUTINA CORIACEA (Desert ash)	13					14				
	18		28,800							

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
FRAXINUS VELUTINA TOUMAYI	75			late fall			dry	none	May	
FREMONTODENDRON CALIFORNICUM (Flannel bush)	60		15,000	Aug.-Sept.		50		hot H ₂ O; stratify		
FREMONTODENDRON CALI- FORNICUM VAR. MEXICANUM	60		27,000	July-Aug.		55		hot H ₂ O; stratify		
GAILLARDIA ARISTATA (Common perennial gaillardia)	13 26			summer		24	dry	none	spring	
GAILLARDIA PINNATIFIDA	13					55				
GALIUM BOREALE	71		756,666			1				
GARCINIA ECHINOCARPUS	54									
GARDENIA LATIFOLIA	54		220 (fruit)	Dec.-Jan.						
GARRYA BUXIFOLIA	60		29,000	Sept.-Oct.		5		stratify 90 days		
GARRYA ELLIPTICA (Silk tassel bush)	60		18,000	Oct.-Dec.		53		stratify 90 days		
GARRYA FREMONTI (Bear bush)	60		26,000	Oct.-Dec.		24		stratify 90 days		
GARUGA PINNATA	54		2,080	June-Nov.		44				1100
GAULTHERIA PROCUMBENS	15		2,835 (berries)		98					
	26			fall			moist	stratify	fall, spring	
	72		163,000		97					
GAULTHERIA SHALLON (Salal)	60 77		5,000,000 4 2,572,000	Aug.-Sept. summer		73	dry	stratify light required	spring	

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
GAYLUSSACIA BACCATA	72	3	281,700	summer	95					
GENISTA MONOSPERMA (Bridal-veil broom)	21		5,040							
GENISTA TINCTORIA (Woodwaxen)	8		140,727							
GENTIANA ACAULIS (Stemless gentian)	57						sealed at 40°F.	stratify 30-60 days at 35°F.		
GENTIANA ANDREWSI (Closed gentian)	57						sealed at 40°F.	stratify 30-60 days at 35°F; germinate in light.		
GENTIANA CRINITA (Fringed gentian)	57						sealed at 40°F.	stratify 30-60 days at 35°F.		
GENTIANA LOGODECHIANA	74					40	dry		fall	
GENTIANA PROCERA	71		9,080,000							
GERANIUM INCISUM	60			Aug-Sept		80		none		
GEUM CANADENSE	71		267,058							
GINGO BILORA (Maidenhair tree)	12	25	520	Oct.	95			stratify		
	15					35		stratify	fall or spring	
	47							stratify		
	50							mulch		
	72	25					dry		fall or spring	50

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Outt. Test %	Germin. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
GLEDITSIA TRIACANTHOS (Honey locust)	1		2,840			73		H ₂ SO ₄ two hours		
	2		2,900	fall		99				
	3	20	2,900	fall		75	dry	H ₂ SO ₄ one hour		
	7				94					
	9	25	2,445			96	dry	scarify		
	11	25	2,800	fall	85					
	12					69		scarify or 2 hours H ₂ SO ₄		
	14							KOH		
	15					16		H ₂ SO ₄		
	16		4,365							
	18									
	20									
	22		2,400			62		H ₂ SO ₄ one hour		
	25		3,200			56				
	35					80	dry	H ₂ SO ₄ or stratify		
	37	32	2,790					hot H ₂ O, stratify	spring	
	47						dry	hot H ₂ O	spring	184
	50					58	dry		spring	1,240
	59	25	2,976	fall and winter	86					
	72			fall	95		dry	H ₂ SO ₄	spring	255
	74	28	2,747	fall	95	72	dry	H ₂ SO ₄	spring	420
	75	36	2,742	fall or winter			dry	H ₂ SO ₄	spring	629
	76		4,350	fall	96	85	dry	H ₂ SO ₄ or hot H ₂ O	spring	
	77		2,938	fall	90		dry	none or H ₂ O	spring	215

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
GLEDITSIA TRIACANTHOS INERMIS (Thornless honey-locust)	12 15 22	25	2,800 3,475	fall	90		dry	scarify KOH		
GLUTA TRAVANCORICA	54			May-June		60				10
GLYCYRRHIZA LEPIDOTA	71		52,668							
GMEIINA ARBOREA	54			Apr.-May		53				
GODETIA AMOENA (Lilya)	60		3,400,000	July-Sept.		80		none		285
GOSSYPIUM BARBADENSE (Egyptian cotton)	62		4,000							
GRATIOLA VIRGINIANA	71		41,272,727							
GRAYIA SPINOSA (Spiny hop-sage)	77		153,600	summer	21					
GREVILLEA ROBUSTA (silky oak)	21 32 50		46,800				dry dry	none none	spring late winter (under glass)	
GREWIA	54		45,200	June						
GREWIA ASIATICA	54		14,240	March						
GREWIA ELASTICA (See G. asiatica)	54		7,760	July-Nov.						
GREWIA OPPOSITIFOLIA	54		4,880	Oct.-Dec.						

Name	Ref. No	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Found	Time to Collect	Outt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
HALESIA (Silverbell)	26							stratify	fall or spring soon as ripe or in spring	
HALESIA TETRAPTERA (Great silverbell)	47							stratify		
	50							stratify 1 yr.		
	46						clean, dry	stratify at 70-80°F. for 30-90 days, then at 32-41°F. for 150-210 days		
HALIMODENDRON HALIMODENDRON (Salt-tree)	47						dry	none	spring	
HAMAMELIS (Witch-hazel)	26			late fall				stratify	fall or stratify	88
	46						dry-cool	stratify at 41°F. for 150-180 days, stratify at 41°F. for 150-180 days		324
	47									
HAMAMELIS VIRGINIANA (Witch-hazel)	72		10,890							
HAPLOPHYTON CIMICIDUM	75			Nov.			dry	none	May	
HARDWICKIA PINATA	54			Apr.-May						550 (fruit)
HARDWICKIA PINNATA	54		66			81				51
HEDERA HISPIDA	71		1,681,481 (Nutlets)							
HELERA (Ivy)	50							stratify 1 yr.	soon as ripe	

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
HEDECARUM CORONARIUM (French honeysuckle)	60		70,000	Aug.		52		hot H ₂ O		
HELENIUM MONTANUM	71		1,464,516							
HELIANTHUS ANNUUS (Common sunflower)	17 60 71		32,000 69,049	July-Sept.		96 86		none		
HELIANTHUS GRACILENTUS (Slimstem sunflower)	60		259,000	July-Sept.		43		none		
HELIANTHUS MAXILLARI	71		204,044							
HELIANTHUS PETIOLARIS	71		216,190							
HELIANTHUS SCOPARIUM (Rush-rose)	60		1,000,000	June-Sept.		64		none		
HELIANTHUS TUBEROSUS	71		75,666							
HELICTERES ISORA	54		281,600	Dec.-Jan.						
HELIOPSIS SCABRA	71		116,410							
HEILZONIA WRIGHTI	60		780,000	Sept.-Oct.		26		none		
HERACLEUM LANATUM (Coe parsnip)	60		76,000	July-Sept.		39		none		
HESPERIS MATRONALIS	71		224,197							
HIBISCUS (Hibiscus rosemallow)	47						dry	none	spring	
HICORIA ALBA (Mockernut hickory)	1 15 20	85	113 110	Oct.		85		stratify stratify 60 days	fall or spring	35

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants lb. Seed
HICORIA CORDIFORMIS (Bitternut hickory)	1		110							
HICORIA GLABRA (Pignut hickory)	1 12 15 19 73	30	210 210 200 30	Oct.		87 87		stratify		70
HICORIA LACINIOSA (Bigleaf shagbark)	19	20					moist peat		fall or stratify	
HICORIA OVATA (Shagbark hickory)	1 9		90			86		stratify 70-130 days	fall or spring	30
	15 19 25	85 26	90 85 80	Oct.	90	85 62		stratify		84
HICORIA PECAN (Pecan)	1 3		80 100	fall				stratify	fall or spring	
	12 15		100	fall	95			stratify		35
HIPPOPHAE RHAMNOIDES (Sea-buckthorn)	3 7 8 47	27	25,000 59,090	Sept.		60		stratify	fall or spring	
	50							stratify	soon as ripe or spring	
								stratify	soon as ripe	
HOLARRHENA ANTIDYSENTERICA	54		16,400	Nov.-May		73				9,700

Name	Ref. No.	Lt. Seed 100 Lt. Fruit	No. Clean Seeds per pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
HOLODISCUS DISCOLOR (Rockspirea)	47 50							none	fall fall	5,900
HOLOPTELEA INTEGRIFOLIA	54		13,300			10				
HOMALIMUM TOMENTOSUM	5		176,000			2				
POPEA OROBATA	54		2,000	May		75				1,150
HOPEA PARVIFLORA	54		1600 (fruit)	Apr.-May		34				010
HOSACKIA AMERICANA	71		75,060							
HOVENIA DULCIS (Raisintree)	8 54		20,363 36,000	Dec.-Jan.		75				
HUDSONIA TOMENTOSA (Beach-heather)	72		1,950,000	July	82					
HYDNOCARPUS WRIGHTIANA	54		400	May-June						
HYMENOCLEA MONOCYRA (Burrobrush)	17					74				
HYMENOCLEA SALSOLA (White Barrobrush)	17					78				
HYMENODICTYON EXCELSUM	54		142,960	Jan.-Apr.		22				26,100
HYPERICUM CORIS	78					95	dry		fall	
HYPERICUM FORMOSUM	60		1,916,000	July-Sept.		50		none		

Name	Ref. No.	Lt. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to plant	Usable Plants Lb. Seed
ILEX (Holly)	47 50							stratify stratify 1 yr.	spring	
ILEX AQUIFOLIUM (English holly)	22		57,000	fall	79					
ILEX DECIDUA (Deciduous holly)	73		29,000					stratify	fall or winter	
ILEX GLABRA (Gallberry)	73	5		winter			moist	depulp; stratify 60 days	late spring	
ILEX MONTANA (Mountain holly)	12			fall and winter				stratify	second spring	
ILEX OPACA (Holly)	12	20	31,000	winter	70			stratify	second spring	
	19 26	27		fall				stratify	fall, spring or second fall	
	46						clean, dry	stratify at 75-85°F. 30 days preceded by KOH, HCl, glucose treatment		
	47						dry	KOH+HCl 5 min. each + 5% glucose		
	73	20	21,840	late fall					immediately	
ILEX VERTICILLATA (Winterberry)	2							stratify as for Crataegus stratify	second spring	
	12	20	40,000	winter	70					
	15		2,050 (berries)		51					

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clear Seeds per Pound	Time to Collect	Outt. Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants lb. Seed
ILEX VERTICILLATA (Winterberry) (Continued)	19	11	129,297	winter	82	dry	mulch	fall or spring	6,000
ILEX VOITONIA (Yupon)	58		64,000				stratify	fall or winter	
ILYSAETHES DUBIA	73		137,575,750						
INDIGOFERA DOSUA	54		80,800						
INDIGOFERA ENDECAPHYLLA	54		224,000		30				
INDIGOFERA GALEGOIDES	54		47,200		7				
INDIGOFERA HIRSUTA	54		126,400	Nov.					
INDIGOFERA POTANINI (Potanian indigo)	72			Nov.	99		stratify 110 days at 41°F.	spring	22,000
INDIGOFERA FULGEBELLA	54		69,600	May	73				
INDIGOFERA STACHYODES (See I. dosua)									
INDIGOFERA TINCTORIA (Indigo)	54		133,600	Jan.	1				
IRIS (Iris)	50							soon as ripe	
IRIS PSEUDOCORUS (Yellowflag iris)	49								
IRIS VERSICOLOR (Blueflag iris)	72		32,770	late summer	99		stratify 75 days at 32-50°F.		
ISOERIS ARBorea (Burro fat)	60		5,000	May-July	70		none		

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants lb. Seed
IVA AXILLARIS	71		162,142							
IVA XANTHIFOLIA	71		378,333							

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
JASMINUM (Jasmine)	50								soon as ripe	
JUGLANS CALIFORNICA (California walnut)	60		75	July-Aug.		35		sow in peat moss		
JUGLANS CINEREA (Butternut)	15		25	Oct.		30			immediately	10
	19	23	16			77				
	25									
JUGLANS HINDSI (Hinds walnut)	60		80	fall				sow in peat moss		
JUGLANS NIGRA (Black walnut)	1		28	fall		88	hulled, moist		spring or fall	
	2								fall	
	3	65	38		82			remove husks		
	9		39		90					
	12	40	25	Oct.				remove husks	immediately	12
	18		30							
	20		30			78		stratify 15-60 days	fall	
	25				50					
	28				89					
	59				98					
	72	41	28	fall		75	moist peat	stratify	fall or	
	73		26	fall	90				stratify	
	75		30				dry	stratify 50 days	spring	9
	76	52								
	77	30	24	fall			dry	stratify	spring	
JUGLANS REGIA (Persian walnut)	1		40							
	54		38	Sept.-Oct.		77				
JUGLANS RUPESTRIS (Little walnut)	3	65	78	fall				remove husks	fall	

Name	Rel. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
JUGLANS RUPESTRIS MAJOR (Mogal)	28		92	late summer	98	90	dry	stratify 90 days	spring	22
JUNCUS BUFONIUS	75		32,428,571							
JUNCUS TORREYI	71		37,833,333							
JUNIPERUS (Juniper)	47							stratify in winter at 32-50°F. for 30-60 days or soon as ripe stratify 1-3 yrs.	fall or spring	
JUNIPERUS ASHEI (Ozark white cedar)	50							1 yr. in fruit scarify, stratify at 41°F. 90 days	second fall or second spring	
JUNIPERUS COMMUNIS (Dwarf juniper)	37	20	30,000	3rd Aug. fall	92		clean	stratify		
	2	40	25,454		66					
	3		25,960		24					
	7		32,500		61			stratify	April	
	8				77					
	9									
	11									
	18									
	20									
JUNIPERUS EXCELSA (Greek juniper)	7									
JUNITER HORIZONTALIS (Creeping juniper)	2			second fall						
JUNIPERUS MACROPHYLLA	54		24,000	Oct.						
JUNIPERUS MONOSPERMA (One-seed juniper)	3							stratify 30 or 60 days	fall or spring	
	75	15	18,000	fall	70		dry	stratify 60 days	winter or spring	2,500

Name	Ref. No.	Lb. Seed per Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
JUNIPERUS MONOSPERMA (One-seed juniper) (Continued)	77						dry	stratify	fall or spring	3,260
JUNIPERUS OCCIDENTALIS (Western juniper)	77	10	8,000	fall	51		dry	stratify	fall or spring	
JUNIPERUS PACHYPHLOEA (Alligator juniper)	9 75			winter and spring	85		moist	stratify	April	
JUNIPERUS PROCERA	54		19,600			5				
JUNIPERUS SABINA (Savin)	54		11,040							
JUNIPERUS SCOPULORUM (Rocky Mountain red cedar)	3			second winter			1 year in fruit	scarify; 41° F. 90 days	second fall or second spring	
	9 10 18		28,800 37,655 28,915 7,900 (cones) 31,592 20,276		73					
	22 37 59 76	22	26,500	fall	45 39		dry	stratify May	second fall	95
JUNIPERUS UTAHENSIS (Utah juniper)	9 18 77	25	7,100 5,500 3,584	fall	78 20		dry	stratify	fall or spring	
JUNIPERUS VIRGINIANA (Eastern red cedar)	1 2		17,640	first fall		63	dry, depulped or moist in flesh			

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
JUNIPERUS VIRGINIANA (Eastern red cedar) (Continued)	3							stratify 90 days at 41°F.		
	9				67					
	11	33	39,100		56	63	clean	stratify		
	12	33	18,898	Nov. fall		63		stratify at 41°F.		
	15	25	33,000							
	18		17,640							
	19	69	45,500							
	20				58			stratify	April	
	26							stratify	fall or spring	
	32						must not dry	freeze 30 days in flesh, then clean and plant	winter	
	37	13	42,449	Nov.				freeze 21 days in flesh; then clean and scarify	Mar.	
	46							stratify 65-100 days at 32-50°F.		
	54		46,400			4	clean, dry			
	55	20		fall		56		freeze in ice 21 days; first melt, clean, scarify	fall	4,493
	59				28					
	73		17,000	late fall				stratify - depulp	winter	
	74	15	56,857	fall - winter	61	1	dry	stratify Sept.-Dec.	Dec.	4,493
	76	38	40,000	fall	42		dry	stratify May	second fall	

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants lb. Seed
KAYEA ASSAMICA	51		18	Mar.		8				
KOCHIA SCOPARIA	71		534,117							
KOELREUTERIA PANICULATA (Goldenrain tree)	12	100	2,600	Aug.	86			stratify	immediately	
	47							stratify	fall or spring	
	50							stratify	soon as ripe, or stratify	
KURRIHIA PULCHERRIMA	54		3,840							
KYTIA CALYCINA	54		80,000	Dec.-Apr.	12					

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
LABURNUM ALPINUM (Scotch laburnum)	53		16,000	late summer	99					
LABURNUM VULGARE (Goldenchain)	77		14,900		94	11				
LACTUCA SCARIOLA	71		1,008,888							
LAGERSTROEMIA FLORIBUNDA	54		92,000							
LAGERSTROEMIA FLOSREGINAE	54		23,160	Nov.-Apr.		37				
LAGERSTROEMIA HYPOLEUCA	54		98,000	Feb.-Mar.		85				
LAGERSTROEMIA INDICA (Crapemyrtle)	26						dry		spring	
LAGERSTROEMIA LANCEOLATA	54		121,600			5				77
LAGERSTROEMIA PARVIFLORA	54		1,200	Dec.-May		2				64
LAGERSTROEMIA TOMENTOSA	54		113,600	Sept.						
LANNEA GRANDIS (See Odina wadier)										
LANSIUM ANAMALAYANUM (See L. praec)										
LANSIUM PRAEC	54					52				
LANTANA ACULEATA (See L. camara)										
LANTANA CAMARA	54		32,800	Nov.						
LAPPULA AMERICANA	71		187,216 (nutlets)							
LAPPULA ECHINATA	71		336,296							

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Useful Plants Lb. Seed
LARIX (Larch*)	47 50						dry dry	none none	spring early spring	
LARIX AMERICANA (See L. laricina)										
LARIX DUBROVICA (Dahurian larch)	7 52		80,384			33				
LARIX EUROPAEA (European larch)	1 8 20 43 51 52 54 65 72 77		94,805 74,727 79,230 59,200 54,400 75,000 79,290		50	45 37	dry	30 days at 43°F.	spring	3,000 8,000 6,720 g 10,000
LARIX KEMPFFERI (See L. leptolepis)										
LARIX LARICINA (Tamarack)	1 2 8		89,580 295,040 326,818	fall		60				
LARIX LEPTOLEPSIS (Japanese larch)	1 8 51 52 54 65 72 77		110,000 121,227 123,000 77,280 73,600 100,000 136,980-		54	50 23 32 18				4,000 10,000 10,532 10,000
LARIX OCCIDENTALIS (Western larch)	1 43	2	152,263	Sept.	48	25 56	dry	43°F. 30 days	spring	

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
LARIX SIBERICA (Siberian larch)	7 8 43 51		42,863 41,730		27	33 71 21		43°F. 30 days		
LATHYRUS LATIFOLIUS (Perennial pea)	26			summer			dry	soak	early spring	
LATHYRUS LITTORALIS	22 77		7,540 7,240	summer		40	dry	H ₂ SO ₄ or scarify	early spring	
LATHYRUS MARITIMUS (Seaside pea)	22 77		12,250 12,110	summer		65	dry	H ₂ SO ₄ or scarify	early spring	
LATHYRUS STRICTUS	60		6,000	May-June		49		None		
LATHYRUS SULPHUREUS	60		10,000	summer		62		hot H ₂ O		
LEDUM (Labrador-tea)	47						dry	none	winter or spring (under glass)	
LEONURUS CARDIACA	50						dry	none	spring (under glass)	
LEPARGYREA ARGENTEA (See Shepherdia argentea)	71		585,806 (Nuts)							
LEPIDIUM DENSIFLORUM	71		1,810,000							
LEPIDIUM RAMOSISSIMUM	71		2,063,636							
LEPIDOSPARTUM SQUAMATUM (Broombrush)	60		315,000	summer		66		none		

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
LESPEDEZA (Bush clover)	32						dry	scarify	spring	
LESPEDEZA BICOLOR (Shrub bushclover)	58 72 73	33 10	92,000	fall fall	80 95	59	dry dry	scarify	April spring	5,600
LESPEDEZA CAPITATA (Roundhead bushclover)	61 72	28		fall	95	84	dry	shake 20 min.	April	
LESPEDEZA CYRTOBOTHRYA (Shrub lespedeza)	14 58 73	34	82,350	fall	98	8 81	dry	scarify	spring	4,100
LESPEDEZA FRUTESCENS	72	66		fall	95		dry		April	
LESPEDEZA JUNCSEA (Shrub lespedeza)	58 73	27 50	261,260	fall	89		dry	scarify	spring	29,000
LESPEDEZA SERICEA (Chinese lespedeza)	58 60 62 63 64		210,000 335,000 472,000 (hulled)			13 63		scarify		
LESPEDEZA STIPULACEA (Korean lespedeza)	62 63 64		240,000 238,080 (with hulls)			72				
LESPEDEZA STRIATA (Common lespedeza)	62 63 64		343,000 340,100 (with hulls)			77				
LESPEDEZA STRIATA (Kobe)	62 64		185,000			76 76				

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germin. Test %	Type of Storage	Type of Treatment	Time to Plant	Usabl Plant lb. See
LESPEDEZA VIRGINICA	61					33		shake 20 min.		530
LESPEDEZA GLAUCA	54		13,920	Mar.-July		33				
LEUCOTHOE CATESBAEI (Drooping leucothoc)	26			fall			dry	none	fall or spring (under glass) fall	
LEWISIA REDIVIVA	78					20	dry			
LIATRIS PUNCTATA (Dotted gayfeather)	13 26			late summer		50	dry	none	fall	
LIBOCEDRUS (Incense cedar)	50						dry	none	spring	
LIBOCEDRUS DECURRENS (Incense cedar)	1 46	4	14,240			29	clean, dry	stratify 30-60 days at 32-50°F.		
	51		20,000			18				
LIGUSTRUM (Privets)	32 50						clean, moist	none stratify	winter fall - stratify	
LIGUTRUM AMURENSE (Amur privet)	33 58 72 73	50	12,000	fall fall-winter	22 98 95	44	cool-moist	do not clean	winter or spring	
LIGUSTRUM JAPONICUM (Japanese privet)	33				20					
LIGUSTRUM LUCIDUM (Glossy privet)	12 72	40 40	12,500	winter	98		clean	stratify		

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
LIGUSTRUM VULGARE (European privet)	7		13,250		98		clean, dry	stratify 90 days at 32-50°F.		
	18									
	46									
	72			fall	99			stratify 95 days at 41°F	spring	10,000
LINARIA VULGARIS	71		3,242,857			14				
LINUM LEWISI (Prairie flax)	13		422,325							
	71		648,571							
LINUM RIGIDUM	71		1,513,333							
LINUM SULCATUM	71		124,125 138,000							
LINUM USITATISSIMUM (Flax)	62									
	63									
LIPPIA WRIGHTII (Wright lippia)	17					24				
LIQUIDAMBAR STYRACIFLUA (Red gum)	1		176,500			85		stratify	immediately	
	12		80,000	fall						
	15	10								
	26			fall			moist	stratify	fall or spring	
	32						dry	none	spring	
	47							stratify	spring	
	50							stratify	soon as ripe	
									stratify	
	58					27				
	73	3	175,000	fall	40	27	dry or moist	stratify	spring	
LIRIODENDRON TULIPIFERA (Tuliptree)	1		14,280			15				
	2		18,000	fall				stratify	fall or spring	

Name	Ref. No.	Lb. Seed 100 Lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
LIRIODENDRON TULIPIFERA (Tuliptree) (Continued)	12		14,500	fall	10				immediately	
	15	32					keep moist	stratify	fall or spring	
	19	28	9,526				clean	soak 24 hours., freeze 24hrs., then stratify 7C days alternate temperature 32-50°F stratify or sow soon as ripe		
	32							stratify soon as ripe	spring	490
	46							stratify 20C days in wood ashes	spring	100
	47	83			10	14		none	fall or early spring	
	50	32	10,950	fall	10		moist	sow in peat		
LITHOCARPUS DENSIFLORA (Tanoak)	60		110	fall	12	78				
LITSEA PANAMONJA	54		160	July-Aug.		90				120
LITSEA POLYANTHA	54		2,400	Nov.-Dec. Jan.-July		61				
LITSEA SEBIFERA	54		3,840	Dec.-Feb.						
LITSEA UMBROSA	54		2,560 (fruit)	Oct.-Nov.		2				
LOBELIA DORTMANNIA (Water lobelia)	6			Sept.		89		150 days H ₂ O at 35°F.		

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
LONICERA (Honeysuckle)	25 37 50	3		fall			clean	stratify stratify	soon as ripe or stratify	
LONICERA BELLA	72	4		summer				mulch	fall	17,900
LONICERA BELLA ATROROSEA	72		115,000	summer	93					
LONICERA CHRYSANTHA (Coralline honeysuckle)	72			summer			dry	mulch	fall	3,700
LONICERA HISPIDULA (California honeysuckle)	60		27,000	fall		20		stratify 30 days		
LONICERA INVOLUCRATA (Bearberry honeysuckle)	13 18 77	3	226,850 476,800	early summer		83				101
LONICERA MAACKI (Amur honeysuckle)	12 46 58 72	14		fall			clean dry	stratify stratify 75-90 days at 32-65°F.	spring	
LONICERA MAACKI PODOCARPA (Late honeysuckle)	72		193,500 134,300	fall	53		dry	mulch	fall or spring	30,300
LONICERA MORROWI (Morrow honeysuckle)	53 72	4	190,700 114,250	summer	83					
LONICERA MUENDENIENSIS	72	5		summer			dry	mulch	fall	6,700
LONICERA NOTHA	72	4		summer			dry	mulch	fall	6,700

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable plants Lb. Seed
LONICERA TATARICA (Tatarian honeysuckle)	3		145,000	summer			dry	stratify 60 days at 41°F.		
	8		181,818							
	12	12	174,000	July			clean	stratify	spring	
	18		150,400							
	19	2				95			April	
	20				80					
	37		128,430	summer	97		dry	mulch	fall	11,000
	53	4	144,300		95					1,010
	59	3								
	74	8	150,000	summer	94	72	dry	stratify Dec.-Apr.	fall or spring	
LONICERA TATARICA SIBERICA (Red tatarian honeysuckle)	76				68					
	77	4	124,800	early summer						
	3		120,000	summer			dry	stratify 60 days at 41°F.		
	7					75				
LONICERA XYLOSTEUM (European fly honeysuckle)	72	6		summer						
	54		2,400	July-Sept.		85				
LOPHOPETALUM FIMBRIATUM										
	60		115,000	late spring		90		scarify		
LOTUS AMERICANUS (American deer-vetch)										
	72		417,000	Aug.		83	dry, tight	none or scarify	fall or spring	
LOTUS CORNICULATUS										
	60		46,000	late spring		25		scarify		
LOTUS CRASSIFOLIUS										
	60		141,000	June		6		scarify		
LOTUS GRANDIFLORUS										
	13					7				
LOTUS HOSACKIA "BRIGHTI"										

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
LOTUS SCOPARIUS (Broom deervetch)	60		436,000	early summer		54		scarify		
LOTUS STRIGOSUS	60		603,060	May		52		scarify		
LOTUS TRISPERMUS	17					22				
LOTUS WRIGHTII (See L. hirsackia wrightii)										
LUDWIGIA ALTERNIFOLIA	71		15,922,824							
LUPINUS ALBICAULIS	60		38,000	summer				fresh seed none; stored seed hot H ₂ O		
LUPINUS ANDERSONI	60		11,000	summer		77		fresh seed none; stored seed hot H ₂ O		
LUPINUS ARBOREUS	60		9,000	summer		38		fresh seed none; stored seed hot H ₂ O		
LUPINUS ARGENTEUS	13					64				
LUPINUS COLUMBIANUS	60		11,000	summer		42		fresh seed none; stored seed hot H ₂ O		
LUPINUS EXCUBITUS	60		27,000	early summer		92		fresh seed none; stored seed hot H ₂ O		
LUPINUS FORMOSUS	60		19,000	June		93		fresh seed none; stored seed hot H ₂ O		
LUPINUS HIRSUTISSIMUS	60		23,900	May		61		fresh seed none; stored seed hot H ₂ O		
LUPINUS LATIFOLIUS	60		34,600	summer		78		fresh seed none; stored seed hot H ₂ O		
LUPINUS LITTORALIS	77			summer		65	dry	fresh seed none; stored seed hot H ₂ O	early spring	

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
LUPINUS LONGIFOLIUS	60		24,000	spring		92		fresh seed none; stored seed hot H ₂ O		
LUPINUS PERENNIS (Sun-dial lupine)	51		18,800			86				
LUPINUS STIVERSI	60		21,000	late spring		96		fresh seed none; stored seed hot H ₂ O		
LUPINUS SUCCULENTUS	60		13,000	May-June		85		fresh seed none; stored seed hot H ₂ O		
LUPINUS TORREYI	60		59,000	summer		30		fresh seed none; stored seed hot H ₂ O		
LUPINUS TRUNCATUS	60		57,000	May		32		fresh seed none; stored seed hot H ₂ O		
LYCARIUS DRUMMONDI (Drummond campion)	13 26			summer		89	moist	stratify		
LYCIUM (Lycium)	47								soon as ripe	
LYCIUM ANDERSONI (Water jacket)	17					68				
LYCIUM CHINENSE (Chinese matrimony vine)	72		170,800	fall	99		dry		spring	24,000
LYCIUM EXSERTUM	17			spring and summer late fall		94	dry	none	spring	
	75					94	clean, dry	none	spring	
LYCIUM HALIMIFOLIUM	72		260,000	fall	99		dry		spring	29,000
LYCIUM PALLIDUM	75	7		summer			dry		spring	

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lib. Seed
LYCIUM RICHII	60		1,371,000	June		11		none		
LYCOPUS AMERICANUS	71		3,026,666 (Nutlets)							
LYCOPUS LUCIDUS	71		908,000 (Nutlets)							

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
MACARANGA DENTICULATA	54		54,000							7,000
MACARANGA INDICA	54		20,000							
MACARANGA FUSTULATA	54		15,520	Oct.-Nov.		50				
MACHILUS EDULIS	54		13 (fruits)	Nov.-Dec.		30				
MACHILUS GAMBLEI	54		1,600	May-June		40				
MACHILUS GAMMIEANA	54		144	Nov.-Dec.		90				
MACHILUS ODORATISSIMA	54		1440 (fruit)	Apr.						
MACLURA POMIFERA (Osage-orange)	1		12,500			77		5 days H ₂ O; or stratify 60 days		
	2		11,630	fall			dry	none or stratify		
	3		12,000	after frost						
	9		7,400							
	12	3	5,750	fall	96	77	dry			
	16		11,159			23				
	17					20				
	18		16,000							
	19	10								
	20				70			none or stratify 15-30 days	April	
	25		13,120			77				
	30		13,200			85				
	32						dry	none	spring	
	37	2	14,565							
	47						dry	H ₂ O 2 days	spring	
	50						dry	none	spring	
	58									
	59				86	70				546
	72	3								
	73	3	12,500	fall	90	74	moist sand	depulp	spring	575
	74	2	15,231	fall - winter	81	34	dry	none	fall or spring	513
	75	5	12,000	winter	92		dry	none	spring	919

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Outt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
MACROCALYX SP. MADIA ELEGANS (Common madia tarweed)	71 60		73,821 159,000	summer		87		none		
MAGNOLIA (Magnolia)	26 50			soon as ripe			must not dry moist	stratify stratify	soon as ripe soon as ripe	
MAGNOLIA ACUMINATA (Cucumber tree)	1 3 12 15 46 67		3,140 1,909 3,000	Oct.	71		clean	stratify		
		4					clean, moist	stratify 180 days at 41°F. remove pulp; stratify 150-180 days at 36-40°F.	fall or stratify fall	
MAGNOLIA CAMPBELLI	72 54	4	13,000 6,400	fall Oct. - Nov.		50				
MAGNOLIA GRANDIFLORA (Evergreen magnolia)	1 32 46		1,957	Sept.				depulp; stratify	fall or stratify	
MAGNOLIA SALICIFOLIA (Anise magnolia)	53		3,580	fall	97		clean, moist or dry	stratify 120-150 days at 50°F.		
MAGNOLIA TRIPETALA (Umbrella magnolia)	53		1,660		99					
MAHONIA (See Berberis)										
MAIANTHEMUM CANADENSE	49							stratify 140 days at 32-50°F.		
MALLOTUS ALBUS	54		19,200							

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seed per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. seed
MALLOTUS PHILIPPINENSIS	54		5,005	Mar.-May		48				
MALUS (Crab apple)	46						clean, dry	soak 48 hrs., then stratify at 32-50°F. for 14-90 days		
MALUS BACCATA (Siberian crab)	3	3	77,000	fall	90		dry	75 days at 41°F.		
	7		85,000							
	18		22,000							
	29									
	76	4								
MALUS CORONARIA	72	1		fall						
MALUS FLORIBUNDA (Japanese flowering crab)	72		59,130	fall						
MALUS FUSCA (Western crabapple)	77	2	10,900	Sept.	99		dry	stratify	spring	
MALUS ROBUSTA	72		16,900	fall	90					
MALUS SARGENTI (Sargent crab)	72		70,400	fall	99					
MALUS SYLVESTRIS (Apple)	7		13,636		90					
	8		11,000							
	29									
MALUS ZUMI (Zumi crab)	72									
MANGIFERA INDICA (Mango)				Apr.-May						
MARRUBIUM VULGARE (Horehound)	60		462,000	throughout summer			52	none		

6,752

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
MALVA BOREALIS	71		286,714							
MATRICARIA SUAVEOLENS	71		3,492,307			11				
MEDICAGO ARABICA (Southern bur clover)	64		24,720			12		none		
MEDICAGO HISPIDA (California bur clover)	60 62 64		142,000 209,000 31,700 (burs)	May		10	dry		early fall	
MEDICAGO LUPULINA	62 64		300,000 289,834			75 73			fall & early spring	
MEDICAGO SATIVA (Alfalfa)	71 72 77		378,333 325,000	July summer		87 82	dry-tight dry	none scarify	spring early spring	
MEIBOMIA ACUMINATA (See Desmodium)	62 63 64 71 72		220,000 226,720 245,405 220,000	Sept.		81 85		none or scarify	spring	
MEIBOMIA CANADENSIS	71		73,225							
MELIA	32 50						dry	none	spring soon as ripe	
MELIA AZADIRACHTA	54		2,140	Mar.-Aug.		29				

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
MELIA AZEDARACH (Chinaberry)	17 54		640 (fruit)	Nov.-Feb.		60 65				130
MELIA DUBIA	54		1,440 (fruit)							
MELIA INDICA (See M. azadirachta)										
MELILOTUS ALBA (Sweet clover)	62 63 64 71 72 77		250,000 258,560 227,000 235,000	Aug. summer		71 90 77	dry-tight dry	none or scarify scarify	spring early spring	
MELILOTUS ALBA ANNUA (White sweet clover)	64					47				
MELILOTUS INDICA (Sour clover)	62 64		300,000 334,493	spring		41	dry		fall	
MELILOTUS OFFICINALIS	77			summer		71	dry	scarify	early spring	
MELOCANNA BAMBUSOIDES	54			July						11
MEODORA SCABRA	17			early summer		70	dry	none	spring or summer spring	
	75		102,500			99	dry	none		
MEODORA SCOPARIA	17					2	dry	none	spring or summer	
MENISPERMUM DAURICUM (Asiatic moonseed)	8		5,909							

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
MENTHA CAMDENISIS	71		4,540,000 (Butlets)						
MESEMBRYANTHEMUM GROCEUM	60								
MESPILUS GERMANICA (Medlar)	7		292,000	June-Aug.	22		none		
MESUA FERREA	54		144	July-Apr.	55				83
MICHELLIA CHAMPACA	54		7,520	Mar.-Dec.	75				2,900
MICHELLIA EXCELSA	54		4,800	Oct.-Dec.	40				1,000
MICHELLIA LANUGINOSA	54		3,360	Nov.-Jan.	5				
MICHELLIA MONTANA	54		2,400	Aug.-Sept.	22				
MICHELLIA OBLONGA	54		2,800	Aug.-Sept.	39				
MILIOSA VELUTINA	54		1,131						
MILIOSA (Catclaw)	26					dry	soak	spring	
MIMOSA BIUNCIFERA (Catclaw)	17				20				
MIMOSA DYSOCARPA (Velvetpod mimosa)	17				48				
MILAJULUS CARDINALIS (Monkey flower)	60		22,000,000	June-Aug.	95		none		
MILAJULUS LANGSDORFII	78				65			fall	
MILAJULUS RINGENS	71		45,400,000			dry			

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
MIMUSOPS ELENGI	54		928	June-July						
MITCHELLA REPENS (Partridgeberry)	72	12	198,400	fall	99					
MITRAGYNA DIVERSIFOLIA	54		672 (fruit)							
MITRAGYNA PARVIFOLIA	54		4,800,000	Dec.-Feb.						
MONARDA PISTULOSA	71		1,418,750 (Butlets)							
MONARDELLA ODORATISSIMA	60		600,000	July-Sept.		18		fresh seed none; stored seed stratify 90 days		
MONOLEPIS NUTTALLIANA	71		1,375,757							
MORINDA CITRIFOLIA (Indian-mulberry)	54		2,880							
MORUS (Mulberry)	47						dry	none	fall or spring	
MORUS ALBA (White mulberry)	1		200,000							
	2		313,873	summer		81	cold, dry or moist	60 days at 41°F.		
	3	2		spring			cold, dry	60 days at 41°F.		
	7		350,000	spring	90	95	dry			
	12	3	272,200		83					
	18									
	19	1					dry		spring	
	26									
	37	6	294,099		49	26		50 days at 43°F.		
	43				50					
	54		206,400	May						

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
MORUS ALBA (White mulberry) (Continued)	59	3		late spring	81	73				6,062
	72			early summer						
	74	2	304,233	early summer	98	60	dry	none	spring	5,583
	75		169,881	early summer	80		dry	none	spring	7,580
	76	3	130,800				dry	stratify	spring	2,720
	77				63		dry			3,300
	54		230,400	Mar.-Apr.		8				
MORUS INDICA	54		112,000	Apr.-June		41				
MORUS NIGRA (Black mulberry)	3	2		spring	92		cold, dry	60 days at 41°F.		
	7									
	1					46				
MORUS RUBRA (Red mulberry)	2		313,873	summer		81	cold, dry or moist	60 days at 41°F.		
	3	2		spring			cold, dry	60 days at 41°F.		
	12	3	200,000	spring		46	dry			
	32			June			clean	none	immediately	
	53	25		late spring	92		dry	none	soon as ripe	6,172
MUHRAJA KOENIGI MYRICA (Waxmyrtle; bayberry)	72	3	425,000	spring	92	50	dry	depulp	immediately or second spring	
	73									
	54		2,080	July-Oct.						
	50						clean	stratify	soon as ripe or stratify	

Name	Height	Unopened Fls. per Plant	Seeds per Plant	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
MYRICA CALIFORNICA	60		22,000	Sept.		60		stratify 90 days		
MYRICA CAROLINENSIS (Barberry)	46						clean, dry	stratify 90 days at 41° F.		
MYRISTICA TRYA	72	62	55,500	fall - winter	90		dry	remove wax, stratify 90 days	spring	5,600
MYRISTICA KINGI	54		240							
MYRISTICA MAJABARICA	54		95							
MYRISTICA SEMISERRATA	54		27							
MYRSINE SEMISERRATA	54		6,080 (fruit)	Dec.						

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
NANDINA DOMESTICA (Nandina)	26						must not dry	stratify	fall or spring	
NAUCELEA EXCELSA	54		85 (fruit)							
NEMOPANTHUS (Mountain holly)	50							stratify	soon as ripe or stratify	
NEMOPANTHUS MACROPHYLLA (Mountain holly)	15 72		1600 (berries) 37,000	late summer	49 98					
NEPETA CATARIA	71		908,000 (nutlets)							
NESLIA PANICULATA	71		148,852							
NICOTIANA GLAUCA (Tree tobacco)	60		10,000,000	June		80		none		
NOLINA BIGELOVI	17					74	dry	none	spring and summer	
NOLINA MICROCARPA	14 17					0 91	dry		fall or winter	
NYMPHAEA TUBEROSA (White water lily)	6			Aug.		56		210 days H ₂ O at 35°F.		
NYSSA (Tupelo)	47							stratify	soon as ripe; or spring	
	50							stratify 1 yr.	soon as ripe	

Name	Ref. No.	Lb. Seed 100 Lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Germ. Test % Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Fruit Lb. Seed
NYSSA AQUATICA (Tupelo)	32								
NYSSA SESSILIFLORA	54		7,040		33		stratify; old stratified seed OK	fall or stratify	
NYSSA SYLVATICA (Black gum)	1 12 72	25 25	2,840 4,000	fall	98		stratify		

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
ODINA WODIER	54		4,320	May-June		43				
OENOTHERA BIENNIS	71		1,375,757							
OENOTHERA HOOKERI (Evening primrose)	60		1,400,000	summer		70		none		
OLAX SCANDENS	54		3,040							
OLEA CUSPIDATA	54		3,920	Sept.-Jan.		64				
OLEA EUROPAEA (Olive)	50						clean	scarify or 1% OH		1,450
OLEA GLANDULIFERA	54		1,600	Feb.		29				
OLNEYA TESOTA (Tesota)	17					0				
ONOSMODIUM OCCIDENTALE	71		32,198 (nutlets)							
OROXylum INDICUM	54		4,240	Dec.-Feb.		65				
ORTHOCARPUS LUTEUS	71		3,492,307							
OSMARONIA CERASI FORMIS (Indian plum)	50							stratify soon as ripe	soon as ripe or stratify	
	60		1,800	late summer		100		stratify 75 days		
OSTRYA (Hophornbeam)	47							stratify soon as ripe	soon as ripe or stratify	
	50							stratify	soon as ripe	
OSTRYA VIRGINIANA (Hophornbeam)	2 13			summer		0			summer	

Name	Ref. No.	Lb. Seed 100 Lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
OSTRYA VIRGINIANA (Hophornbeam) (Continued)	18 76	21	30,240						
OUGEINIA DALBERGIOIDES	54		13,920	May-June	53				3,350
OXALIS CYMOSA	71		1,915,611						
OXALIS STRICTA	71		3,026,666						
OXYDENDRUM ARBOREUM (Sourwood)	47							winter or spring (under glass)	
	50							soon as ripe (under glass)	
OXYTROPIS LAMBERTII	71		518,857						

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
PAEONIA BROWNII (Western peony)	60		2,000	late spring		42		stratify 75 days		
PALAEQUIM BOURDILLONI	54		50							
PALAEQUIM ELLIPTIUM (See Bassia elliptica)										
PALAEQUIM POLYANTHUM (See Bassia polyantha)										
PALLIURUS SPINA-CHRISTI (Christ thorn)	7					60				
PARASHOREA (See Shorea)										
PARKINSONIA ACULEATA (Horse bean)	60		12,000	May-July		100		boiling H ₂ O		
PAROSELA GREGGI	17					16				
PAROSELA POGONANTHERA (See Dalea pogonthera)										
PAROSELA SCHOTTI	60		13,900	June		99		none		
PAROSELA SCOPARIA	14 17 75		113,300	Aug.		50 32		none	spring	
							dry			
PARRYELLA FILI FOLIA	14 17 75		73,548	fall		41 38		hot H ₂ O		
							dry	none	spring	5,800
PARTHENIUM ARGENTATUM	75			Nov.			dry	none	spring	
PARTHENOCISSUS QUINQUEFOLIA (Virginia creeper)	2 12 18 19	25 27	12,000 19,950	Sept. Oct.	95		dry	stratify		

Name	Seeds No.	Lb. Seed 100 lb. fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
PARTHENOCISSUS QUINQUEFOLIA (Virginia creeper) (Continued)	20				69			stratify	Nov. or spring	
	35				44		dry	none	spring	
	47							stratify	fall or spring	
	72	18	14,420	fall	98		dry		spring	6,900
	75	16		fall	91		dry	none	fall or spring	
PARTHENOCISSUS TRI- CUSPIDATA (Boston ivy)	76	25							spring	
	77	16	9,760	fall	99	99	dry	stratify	spring	3,200
	72			fall						
PAULOWNIA TOMENTOSA (Paulownia)	12	25	900,000	fall			dry			
	15		800,000		25					
	32						dry	none	spring	
	47						dry	none	spring	
	50				95		dry	none	spring	
PELTANDRA VIRGINICA (Arum)	51									
	6			Sept.				210 days H ₂ O at 35° F.		
PENNISSETUM PURPUREUM (Napier grass)	54			Jan.		40				
PENTHORUM SEDOIDES	71		45,400,000							
PENTSTEMON AMBIGUUS	78					90	dry		fall	
PENTSTEMON ANTIRRHIN- OIDES (Snapdragon pentstemon)	60		2,000,000	spring		62	none			

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Germin. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
PENTSTEMON BREVI-FLORUS	60		5,000,000	throughout summer		21		none		
PENTSTEMON CENTRANTHI- FOLIUS	60		255,000	throughout summer		52		none		
PENTSTEMON DEUSTUS	60		496,000	summer		100		none		
PENTSTEMON HETERO- PHYLLUS	60		1,000,000	summer		34		none		
PENTSTEMON NEWBERRYI	60		1,500,000	late summer		30		none		
PENTSTEMON PALMERI	60		294,000	June				none		
PENTZIA INCANA (Sheepbush)	17					8	dry	none	spring and summer	
PENTZIA SPHAEROCEPHALA	75			summer						
PENTZIA SPHAEROCEPHALA	17					22				
PEREZIA MICROCEPHALA (Sacapellote)	60		320,000	late spring		25		none		
PERICOPSIS MOCHIANA	54		1,456	Feb.						
PETALOSTEMON PURPUREUM	71		349,230							
PETALOSTEMON VILLOSUM	71		232,820							
PETTERIA RAIENTACEA	72		21,700	late summer		98				
PHACELIA CALI-FORNICA (Rock phacelia)	60		368,000	throughout summer		65		stratify		
PHACELIA PARRYI	60		1,466,000	June		44		none		

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
PHACELIA TANACETIFOLIA	60		450,000	May-June		7		none		
PHACELIA VISCIDA	60		2,443,000	June		25		none		
PHASEOLUS ACONITIFOLIUS (Moth bean)	73			Sept.			dry		spring	
PHELLODENDRON (Corktree)	26							stratify	fall or spring Feb.	
PHELLODENDRON AMURENSE (Amur corktree)	47 8 72		36,363 30,140	fall	98		clean			
PHELLODENDRON LAVALLEI	72		32,000	fall	98					
PHILADELPHUS (Mockorange)	26 47						dry dry	none	spring spring	
PHILADELPHUS GORDONIANUS (Gordon mockorange)	22		1,507,200							
PHILADELPHUS LEWISI (Lewis mockorange)	60 77		8,000,000 3,489,444	fall fall		52		stratify		
PHILADELPHUS MICROPHYLLUS (Littleleaf mockorange)	13					69				
PHILLYREA (Phillyrea)	50								soon as ripe	
PHOEBE	54		176							
PHOEBE ATTENUATA	54		810	May-July		65				
PHOEBE HAINESIANA	54		400	Sept.-Nov.		70				

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
PHOEBE LANCEOLATA	54		3,200				clean	stratify 30 days at 41-50°F.		
PHOTINIA GLABRA	46							fresh seed none; stored seed stratify		
PHOTINIA SALICIFOLIA (Christmasberry, toyon)	60		24,000	Oct.		73				
PHYLLANTHUS EMBLICA	54		43,200	Dec.-Apr.						3,950
PHYSOCARPUS (Ninebark)	47						dry	none	spring	
PHYSOCARPUS CAPITATUS (Ninebark)	60 77	12	822,000 190,400	summer		67 70		none		
PHYSOCARPUS OPULIFOLIUS (Ninebark)	8 15 20		454,545 1,661,180 73,200		59			stratify	fall or May	
PICEA AJANENSIS (See P. jezoensis)	72			fall			dry	mulch	fall or spring	30,000
PICEA ALBA (See P. glauca)										
PICEA CANADENSIS (See P. glauca)										
PICEA CANADENSIS ALBERTIANA (See P. glauca albertiana)										
PICEA ENGELMANNI (Engelmann spruce)	1 8 25 43 46	1	162,202 131,363		77	51 67 72	sealed, dry	none stratify 60 days at 32-41°F.		

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants lb. Seed
PICEA ENGELMANNI (Engelmann spruce) (Continued)	51		151,140			92				
	52		136,288							
PICEA EXCELSA (Norway spruce)	1		59,466			54				
	8		55,450							
	25		84,160							
	41									
	43				79	75	sealed, dry at 5-41° F. OK 6 yrs. or more	30 days at 43° F. stratify 60 days at 32-41° F.		
	46						dry, sealed			
	51		61,700			86				8,100
	52		49,184							14,000
	54		53,600			61				14,485
	65		60,000			75				34,100
	72	1	57,912	fall	90	80	cold, dry		spring	
	77		55,600		63		dry			
PICEA GLAUCA (White spruce)	1		232,069			40				
	8		142,500							
	15		232,060	fall						
	19		141,800	fall						
	20		263,780							
	25									
	31				96	67	dry	stratify 32° F. 60 days	May	
	43						36° F. dry, tight carboys			
	46				54	44	clean, dry, tight; 32-40° F.	30 days at 43° F. stratify 60 days at 32-41° F.		
	51		146,500							
	52		136,288			75				12,700

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
PICEA GLAUCA ALBERTIANA (Western white spruce)	10 15 76		176,742 183,000 180,000	fall late summer	100 92	50 68	dry dry	stratify 32°F. 60 days none	late spring	
PICEA GLEHNI (Sakhalin spruce)	52		118,688							
PICEA JEZOENSIS (Yeddo spruce)	8 51		178,181			9				
PICEA KOYAMAI (Koyana spruce)	52		84,064							
PICEA MARIANA (Black spruce)	1 25 46		540,000			67				
PICEA MURINDA (See P. smithiana)	51		151,300			79	dry, sealed	stratify 60 days at 32-41°F.		
PICEA NIGRA (See P. mariana)										
PICEA OBOVATA (Siberian spruce)	8 51		94,590 78,820		90	90				
PICEA OMORIKA (Siberian spruce)	8 46		119,545				dry, sealed	stratify 30-60 days at 32-50°F.		
PICEA ORIENTALIS (Oriental spruce)	8 51 54		62,272 58,885 36,800		84	76 12				
PICEA POLITA (Tigertail spruce)	51					21				

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
PICEA PUNGENS (Blue spruce)	1	2	96,000			63		stratify 60 days at 32°F.		
	8		107,954			63				
	15		94,270	fall		52				
	17		91,550		99		dry		May	
	18				95	67		none		
	20						dry	stratify 60 days at 32-50°F.		
	25					97				
	35					90	dry	none	late spring	
	46									
	51		120,425							
PICEA RUBRA (Red spruce)	52		108,960							
	76	2	90,000	late summer	96					
	1	2	134,600			60				
	25					67		30 days at 43°F.		
PICEA SMITHIANA (Himalayan spruce)	43				59	54	dry, sealed	stratify 30-60 days at 32-50°F.		
	46									
	8		32,722			31				8,750
	54		29,120	Oct.-Nov.						
PICEA SITCHENSIS (Sitka spruce)	1		258,500			32				
	8		181,818							
	46						dry, sealed	stratify 30-60 days at 32-50°F.		
	51		228,570			40				
PICRUS ECHIOIDES (Bristly ox-tongue)	54					35				
	65		250,000			55				25,000
	60		605,000	throughout summer		14		none		
PIERIS FLORIBUNDA (Mountain andromeda.)	8		1,363,636							

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
PIERIS JAPONICA (Japanese andromeda)	8		3,030,000							
PINUS ALBICAULIS (Whitebark pine)	1		2,874			20				
PINUS ARISTATA (Bristlecone pine)	1	2	16,174			66		none		
	43					67				
	51		20,636			95				
PINUS ATTENUATA (Knob-cone pine)	43				57	22		30 days at 43°F.		
	51		21,620			12				
PINUS AUSTRIACA (See P. nigra)										
PINUS BANKSIANA (Jack pine)	1	1	128,800			53				
	8		116,818							
	19		112,800		88		dry		Nov. or May	127
	20		163,034				dry	stratify 60 days at 32-50°F.		
	46				75	70				1,400
	51		137,590							
	52		98,940							
	72	1	123,600	fall	87	50	dry		spring	6,300
	77						dry			
PINUS BUNGEANA (Lacebark pine)	22		3,620							
PINUS CALABRICA (See P. nigra)										
PINUS CARIBAEA (Slash pine)	1	2	15,500			50				
	12		15,500			60				
	32			Sept.			dry	none	early spring	4,000
	33				50				early spring	

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
PINUS CARIBAEA (Slash pine) (Continued)	41						sealed, dry at 5-41°F. OK 1 or 2 yrs. only	30 days at 43°F.		
	43					23				
	58					30				
	66					93	sealed, dry, 30-40°F. 6 yrs. OK			
PINUS CEMBRA (Stone pine)	73	1	17,000	fall	64	40	dry, cool, tight	stratify 30 days	early spring	1,500
	8		17,995							
PINUS CEMBRA SIBERICA (Siberian stone pine)	46							stratify 60 days at 32-50°F.		
	7		2,008		82	17	dry, sealed			
PINUS CLAUSA (Sand pine)	51				88					
	1		74,400							
PINUS CONTORTA (Lodgepole pine)										
	1	1	81,560							
	8		134,318							
	10		70,824		100		dry			
	18		85,750		99					
	22		100,600							
PINUS COULTERI (Coulter pine)	46							stratify 60 days at 32-50°F.		
	54		108,800	fall		36	dry			
	77	5			24			stratify 30-60 days at 32-41°F.		
	8		1,363				dry			
	46									

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Germ. Test %	Type of Storage	Type of Treatment	Time To Plant	Usable Plants Lb. Seed
DENSIFLORA (Chinese red pine)	1	2	44,300	fall		dry	stratify 30-60 days at 32-50°F.		
	19 46		41,600		78				
	51		52,000		60			early spring	13,756
	12	2	69,200	Oct.	35	dry	90 days at 32°F. stratify 15-30 days at 35°F.	fall or early spring	12,000
	15 32		47,000	Oct.		dry			
ECHINATA (Hartleaf pine)	33 41				90	sealed, dry 5-41°F. OK 1-2 yrs. only			
	46					sealed, dry	stratify 30-60 days at 32-50°F.		
	58				18				
	59 66				86	dry, sealed 30-40°F. 6 yrs. OK			6,626
	72 73	3	52,610 47,000	fall fall	90 89	dry, cool. tight dry	stratify 30-60 days none	winter spring	5,000 6,626
EDULIS (on)	74		50,815		40				
	9		1,766		96		stratify none	spring	920
	35 75		1,800	Sept.	94	dry			
EXCELSA (Malayan pine)	1 46		10,063			dry	stratify 90 days at 32-50°F.		
	51				86				
	54		8,800	Sept.-Nov.	63				4,375

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
PINUS FLEXILIS (Limber pine)	1	2	5,500		91	dry			
	10		5,461		80		stratify 30-60 days at 32-50°F.		
	18		5,800		67		none	spring	2,330
	35			fall	95	dry			
	46			Sept.-Oct.					
PINUS GERARDIANA	51		4,280						
	75		4,000						
	8		1,500						
PINUS GLABRA (Spruce pine)	54		1,200						
	1		77,500						
PINUS HALEPENSIS (Aleppo pine)	17			late summer		dry	none	Feb.	
	43				72		none		
	77		30,160		99				
PINUS INSIGNIS (See P. radiata)									
PINUS JEFFREYI (Jeffrey pine)	1	2	3,100						
	8		3,590						
PINUS KHASYA	54		1,472	Feb.-Mar.	6				
PINUS KORAIENSIS (Korean pine)	1		800				stratify 60-90 days at 32-50°F.		
	8		909			dry, sealed			
	46								
PINUS LAMBERTIANA (Sugar pine)	1	3	2,233		66	dry, sealed	stratify 90 days at 32-50°F. preceded by 4 days H ₂ O and 2 days at 32°F.		
	46								
	51		2,415		34				

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
PINUS LARICIO (See P. nigra)										
PINUS LARICIO AUSTRIACA (See P. nigra)										
PINUS LONGIFOLIA	8 54		9,727 4,560	Jan.-June		81				1,500
PINUS MERKUSI	54		12,000	Apr.-May						
PINUS MITIS (See P. echinata)										
PINUS MONOPHYLLA (Singleleaf pinon)	51		1,230			14				
PINUS MONTANA (Swiss mountain pine)	8 43		55,318		53	42		30 days at 43°F.		
PINUS MONTANA GALLICA (Swiss mountain pine)	51		53,400			84				
PINUS MONTANA MUGHUS	43					75		30 days at 43°F.		
PINUS MONTANA PUMILIO (Scrubby Swiss pine)	8		88,818							
PINUS MONTANA UNCINATA (Large Swiss pine)	51		60,000			87				
PINUS MONTICOLA (Western white pine)	1 8 46	1	23,500 18,954			31	dry	stratify 60-90 days at 32-50°F., or 45 min. H ₂ SO ₄		
PINUS MURICATA (Bishop pine)	51 1		16,100 51,484			13				

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
PINUS MURRAYANA (See P. contorta)										
PINUS NIGRA (Austrian pine)	1		24,900			64				
	8		24,090							
	37		29,430			93		30 days at 43°F. stratify 30-60 days at 32-50°F.		
	43									
	46									
	51		30,000			82				
	54		49,600		12	30				
	59					11				
	65		25,000			70				
	72	2	17,456		99	98				
	74		22,559		97	43	cold dry	none	spring	337 6,000 9,600 337 3,782
	77		22,400		99	50	dry			
PINUS NIGRA POIRETIANA (Corsican pine)	65		31,000			70				7,500 ¹³²
PINUS PALUSTRIS (Longleaf pine)	1		5,700			50				
	8		6,363							
	12	3	5,400	Oct.		50				
	32			early fall						
	33									
	41				45					
	46						dry, cold	none	early spring	1,000
	58						sealed, dry, 5-41°F. OK			
	66						1 or 2 yrs. only			
	73						dry, sealed	stratify 30 days at 32-50°F.		
						71				
						60	dry, 12% H ₂ O or less; 30-40°F. 2 yrs. OK			
		1	5,228	fall	58	54	dry, cool, tight	dewling	spring	1,035

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
PINUS PARVIFLORA (Japanese white pine)	51		3,150			40				
PINUS PEUCE (Macedonian pine)	1 8		13,263 13,454							
PINUS PINASTER (Cluster pine)	1 51 54 65 77		9,435 7,200 10,720 8,000			81 83 66				
PINUS PINEA (Italian stone pine)	8		545				dry		spring	975
PINUS PONDEROSA (Western yellow pine)	1 1 3 8 8 18 20 33 35 37 41	2	15,955 9,300 15,000 15,090 9,909 14,800 11,002	(Rocky Mt. Form) (Pacific Coast Form) Aug.-Sept. (Rocky Mt. Form) (Pacific Coast Form) 85 81 97		50	dry, tight			
								sealed, dry at 5-41°F. OK for 6 yrs. or more	Nov. or May	
								30 days 43°F. stratify 30-60 days at 32-50°F.		
	43 46				73	67	dry, sealed	none		
	59 74 75 76	2	12,000 15,000 14,800	fall fall	40 75 80 78	34 37 72	dry dry dry	none none none	spring spring late spring	1,471 1,471 9,500

Name	Re- No.	Lb Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
PINUS PONDEROSA (Western yellow pine) (Continued)	77		12,025	(Pacific Coast early fall	84	57	dry		spring	1,300
	77		9,700	(Rocky Mts. Form)	90		dry		spring	537
PINUS PONDEROSA SCOPULORUM (See P. ponderosa)										
PINUS PUNGENS (Mountain pine)	1		40,542			75				
	15		40,540	fall		75	dry	90 days at 32°F.		
	19		35,700							
	72	3	35,700	early fall	80	54				
PINUS RADIATA (Monterey pine)	1		20,000				dry	stratify 60 days at 32-50°F.		
	46									
	51		23,800			48				
	54		23,200							
PINUS RESINOSA (Norway pine)	1	2	52,000			68				
	8		50,000							
	15		52,010	Oct.		69	dry	90 days at 32°F.	May	
	20				88		dry			
	31						36°F. dry, tight carbrys			
	41						sealed dry at 5-41°F. OK 1 or 2 yrs. only			
	43					65	30 days at 43°F.			
	46				76		dry, sealed	stratify 30-60 days at 32-50°F.		
	52		63,216							13,800
	72	1	49,620	early fall	99	85	cold, dry, sealed			10,423

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plant Lb. Seed
PINUS RIGIDA (Pitch pine)	1	2	62,454			70				
	8		64,363							
	19		64,700		85	62	sealed, dry	30 days at 43°F. stratify 30 days at 32-50°F.		10,300
	43									
	46									
PINUS RIGIDA SEROTINA (See P. serotina)	52	3	60,500	fall	90	44				
	72									
PINUS SEROTINA (Pend pine)	1		56,000			80				
PINUS SONDEREGGERI (Sondereggeri pine)	1		13,400							
PINUS STROBIFORMIS (Mexican white pine)	1		2,700							
PINUS STROBUS (Northern white pine)	1	2	25,076			67				
	7					72				
	8		25,409							
	12		22,800	Oct.		60				
PINUS SYLVESTRIS (Scotch pine)	15	2	25,070	Sept.	92	67	dry, cold	90 days at 32°F.	early spring	5,380
	20				96		dry		May	
	31						300F. dry, tight cartons			
	43				87	74	dry, sealed	30 days at 43°F. 30-00 days at 32-50°F.		5,380
	46		20,480							
	52		70,800			55				
	1					90				
	7									
	8		77,190							
	12		71,000	Oct.		55			early spring	

Name	Ref. No.	Lb. Seed 100 lb. fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
PINUS SYLVESTRIS (Scotch pine) (Continued)	15		70,460	Oct.		55	dry	90 days at 32°F.		
	19		64,500							
	20		81,270							
	22		77,480							
	43					63	dry, sealed	30 days 43°F. stratify 60-90 days at 32-50°F.		11,200
	46									
	52		100,800			23				
	54		28,000			75				15,000
	65		75,000			85	acid, dry, sealed			21,973
	72	2	75,536	fall	97		dry			
PINUS T.EDA (Loblolly pine)	77		77,250		99	60	dry			12,220
	1	3	24,000	Oct.		41			early spring	
	12		15,700			40				
	15	2	24,050	Oct.		41	dry	90 days at 32°F. stratify 30 days at 35°F.	fall or early spring	5,000
	32			Oct. or Nov.			dry			
	33				82		sealed, dry 5-41°F. OK 1 or 2 yrs. only			
	37		22,227							
	41									
	43						sealed, dry	30 days at 43°F. stratify 60 days at 32-50°F.		
	46				20					
	58				62					
	66					44	dry, sealed 30-40°F. 6 yrs. OK			
	69					73		stratify 60-90 days at 32-40°F. stratify 60 days	spring	2,500
	73	1	15,870	fall	90	51	dry, cool			

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
PINUS THUNBERGI (Japanese black pine)	1 46		48,000					stratify 30-60 days at 32-50°F.		
PINUS TORREYANA (Torrey pine)	51 54 51		40,380 84,400 657		26	84 72 4				
PINUS TUBERCULATA (See P. attenuata)										
PINUS VIRGINIANA (Virginia pine)	1 12		62,142 62,000							
	15 19 72		62,140 40,500 50,800	Oct. fall	90		dry	90 days at 32°F.	early spring	157
PIPIADENIA OUDHENSIS	54	3	14,080	Apr.-May		60				
PISTACIA CHINENSIS (Chinese pistache)	60		7,000	Aug.-Sept.		65		fresh seed none; stored seed hot H ₂ O and stratify		13,800
PISTACIA INTEGERRIMA	54		8,640	June-Aug.		5				
PISUM SATIVUM ARVENSE (Austrian winter field pea)	62		4,800							
PITHECOLLOBIUM SAMAN	54		2,250	Apr.						
PLANTAGO	26 75			winter June		24	dry dry	none none	spring fall or winter	
PLANTAGO MAJOR	71		2,270,000							
PLANTAGO PURSHII	71		605,333							

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
PLANTAGO RUGELII	71		648,571							
PLATANUS (Planetree)	47							stratify	fall or spring	
	50							none	spring	
PLATANUS OCCIDENTALIS (Sycamore)	1		170,000			30				
	3		100,000	fall			dry	stratify 60 days at 41° F.	spring	
	8	34	32,136							
	15	90								
	19					67				
	25									
	26						dry		spring	
PLATANUS ORIENTALIS (European planetree)	1		168,000		75					
	7		112,727							
	8									
	12			Sept.		30		stratify		
PLATANUS RACEMOSA (California sycamore)	60		219,000	summer		12		stratify		
PLATANUS WRIGHTII (Arizona sycamore)	17					0				
PODOCARPUS NERIFOLIA	54		352	Jan.-Mar.		40				130
POECILONEURON PAUCIFLORUM	54		240			8				
POGOSTEMON FLEDRUN- THOIDES	54		25,600							
POLANISIA GRAVEOLENS (Clammy-weed)	71		148,852							

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
POLYOMINTHA INCANA	17 75			summer-fall		0	dry	none	spring	160
POLYANTHIA LONGIFOLIA	54		270	Aug.-Oct.		50				
POLYANTHIA SIMIARUM	54		192	Jan.-July		73				110
POLYGONUM AVICULARE	71		672,592							
POLYGONUM CONVOLVULUS	71		64,857							
POLYGONUM ERECTUM	71		213,647							
POLYGONUM HYDROPIPER	71		275,151							
POLYGONUM LAPATHIFOLIUM	71		292,903							
POLYGONUM PARONYCHIA	22 72		89,600 80,177	summer-fall		35	dry		late fall	
POLYGONUM PENNSYLVANICUM	71		126,111							
POLYGONUM PERSICARIA	71		255,775							
POLYGONUM RAMOSISSIMUM	71		109,397							
POLYGONUM VIRGINIANUM	71		85,660							
PONGAMIA GLABRA	54		672	Jan.-June		73				
PONTERIERIA CORDATA (Pickerel-weed)	20				57			stratify	May	
POPULUS (Poplar)	26			spring			must not dry	stratify	soon as ripe	
	47							stratify	fall or spring	
	50								soon as ripe	

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
POPULUS DELTOIDES (Eastern cottonwood)	1		1,350,000							
POPULUS EUPHRATICA	54		16,640 (fruit)	Apr. - Aug.						
PORTULACA (Portulaca)	26			summer - fall			dry	none	spring	
PORTULACA OLERACEA	71		3,492,307							
POTAMOGETON AMERICANUS (Pond weed)	6			Sept.		58		210 days at 35°F. in H ₂ O		
POTENTILLA GLANDULOSA	60		1,438,000	July - Sept.				fresh seed none; stratify stored seed		
POTENTILLA MILLEGIANA	71		11,350,000							
POTENTILLA MONSPELIENSIS	71		3,492,307							
POTENTILLA PARADOXA	71		3,783,333							
POTENTILLA RECTA	71		2,270,000							
PRIMULA DENTICULATA	78					50	dry		fall	
PRIMULA OBCONICA	78					40	dry		fall in light	
PRIMULA PULVERULENTA	78					40	dry		fall	
PROSOPIS GLANDULOSA (Honey mesquite)	13 54		192 (fruit)	May		88 60				
PROSOPIS JULIFLORA (Mesquite)	17 54		10,080	May - June		56 63				

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants lb. Seed
PROSOPIS PUBESCENS	14 17					98 24		60 min. H ₂ SO ₄		
PROSOPIS SILICICLARA	54		12,080	June-Aug.		46				
IKOTIUM SEMINATUM	54		1,760							
IRUNELLA VULGARIS	71		756,666 (nutlets)							
IRUPUS AMERICANA (Wild plum)	2 3 12 15 19 20	22 20 34 12	1,300 1,150 600 1,000 832 1,088	summer summer summer	96			stratify stratify stratify	fall fall fall	324 400
	26 32						clean	stratify 160 days stratify stratify	fall or stratify fall or spring soon as ripe	
	37 46	8					clean, dry	stratify 150 days at 32-50°F. or less time if pericarp removed		
	58 59 72	16 9	1,097	late summer	84 95		peat			113 231
	73 74	33 9	600 725	summer summer- fall	87 76		dry dry	stratify Sept.-Mar.	fall fall or stratify	113
	75 76	7 12	950	summer summer	92 72	43	dry cellar	stratify 180 days stratify Nov.-Mar.	fall or spring	135

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
RUNUS AUGUSTIFOLIA (Chickasaw plum)	3	22	770	summer	96			stratify	fall	
	12	20	900	July				stratify	fall	
	37	8	1,031							
	58									152
	59	10	1,322	summer	91	70	dry	stratify Sept.-Mar.	fall or stratify	152
RUNUS ARBorea (apricot)	74				51		dry	stratify 25 days	fall or stratify	
	3		250	June-July	92					
	7									
	8		2,590							
	29		2,200		95	70	clean, dry	stratify	immediately	
RUNUS AVIUM (Bird cherry)	34							stratify 90 days at 32-50°F.	seen as ripe or stratify	
	46									
	50									
RUNUS BESSEYI										
	74	19	2,264	July	97		dry	stratify Nov.-Mar.	fall or stratify	
	75	15		summer	95		dry	stratify	fall	1,453
	76	26	1,500	July	89	72	cellar	stratify Nov.-Mar.	fall or spring	
RUNUS CERASIFERA (Myrobalan plum)										
	29		1,025	summer	62	30		stratify	immediately	
	34									
	54		1,504							
RUNUS DEMISSA (Western chokecherry)										
	21		3,900							
	22		3,040							
	60		1,600	summer						
	77	25	3,790	summer-fall	92	12	dry	stratify 60 days	spring	174

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
PRUNUS DEMISSA MELANOCARPA (Black western choke-cherry)	28				96					
PRUNUS DIVARICATA	7				96					
PRUNUS EMARGINATA (Bitter cherry)	22 60 77	25	4,120 1,800 5,471	summer summer	92	5	dry	stratify 90 days stratify	spring	
PRUNUS GRAVESI	53		2,300	late summer	99					
PRUNUS HORTULANA (Wild goose plum)	72		1,300	summer	90					
PRUNUS ILICIFOLIA (Hollyleaf cherry)	21 60		240 200	early fall		24		fresh seed none; stored seed stratify 90 days		
PRUNUS INSITITIA (Plum)	77	7	625	summer			dry	stratify	spring	
PRUNUS MAHALEB (Mahaleb cherry)	8 29 34 46		4,681 6,000		99	70		stratify	immedi- ately	
PRUNUS MARITIMA (Beach plum)	53 72	11	2,515 2,500	late summer	90		clean, dry	stratify 90 days at 32-50°F.		
PRUNUS MELANOCARPA (See P. demissa melanocarpa)										
PRUNUS MONSONIANA (Wildgoose plum)	46 53		900	late summer	99		clean, dry	stratify 90 days at 32-50°F.		

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
PRUNUS NEPAULENSIS	54		576	Oct.-Nov.		85				
PRUNUS PADUS (European birdcherry)	7 54		1,504		99					
PRUNUS PENNSYLVANICA (Pin cherry)	20 72	16	21,760	summer	34 97			stratify	Nov. or Apr.	
PRUNUS PUDDUM (See P. cerasoides)										
PRUNUS PUMILA (Sand cherry)	18		2,460							
PRUNUS SEROTINA (Wild black cherry)	1 2 12 15 19 20 26	40 40 20	4,620 4,500 4,000 4,990 4,566	Aug.	77 77			stratify	fall	
	33				96			stratify stratify 60-160 days	fall or spring fall or stratify	
	37 58 59 67	39 21	6,358		55 80	70		remove pulp; mulch beds	early fall or stratify	12
	72	26	4,990	late summer				none	immedi- ately	
	73	40	4,000	summer	85		dry			
	74	39	7,021	summer	61		dry	stratify Sept.- Mar.	fall or stratify	

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. clean Seeds per Pound	Time to Collect	Cutt., Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
PRUNUS SIMONI (Apricot plum)	46					clean, dry	stratify 45 days, 32- 50° F. or 25 days if carpels are removed		
PRUNUS SPINOSA (Blackthorn)	7				99				
PRUNUS SUBCORDATA (Pacific plum)	60		450	Aug.-Sept.	100		stratify 90 days		
PRUNUS TOMENTOSA	46					clean, dry	stratify 75 days at 32-50° F. or 42 days if carpels are re- moved		
PRUNUS VIRGINIANA (Chokecherry)	53	7	6,400						
	72		5,690	July	99		stratify	fall	145
	2		6,500						
	3	20	5,000 1200 (fruits)	summer					
	18	14	5,700						
PRUNUS WATSONII (See P. angustifolia)	19							Nov. or Apr.	110
	20				82				
	37	24	3,012						
	59				90		stratify 100 days at 41° F.	spring	1,175
	72	13	8,400	summer	93	sand and peat dry	stratify Nov.-Mar.	fall or strat- ify	110
PSUEDOLARIX KLEMENTERI (Goldenlarch)	74	20	3,320	summer	92		stratify Nov.-Mar.	fall or spring	
	76		4,500	summer	93	cellar			
PSUEDOTSUGA DOUGLASI (See P. taxifolia)									
PSUEDOTAXUS KENTUCKIANA (Kentucky cypress)	8		10,000						
	47					dry	none	spring	

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
PSEUDOTSUGA TAXIFOLIA (Douglas fir)	1	2	43,422			50				
	8		42,300			48				
	15		40,000	fall		86	dry			
	17				98					
	18		34,300					none		
	22		37,300	(Rocky Mountain Form)						
	22		44,800	(Pacific Coast Form)			dry			
	35					35	dry, sealed	stratify 60-75 days at 41-50°F.		
	43					25				10,000
	46					60				11,600
PTELEA ANGUSTIFOLIA (Hoptree)	54		46,000							
	65		42,000							
	75	2	32,000	Sept.	85		dry	none	spring late	
	76		35,000	late	98		dry	none	spring	
		1		summer						
	77		41,050	fall	74		dry			6,617 ¹ / ₆
	9		7,246			98				
	18		18,350							
	37		11,884		98					
	47									
PTELEA TRIFOLIATA	50									
	72		6,000 (fruit)	late summer	99					
								stratify	fall or spring	
								stratify	fall or spring	
PTEROCARPUS DALBERGIOIDES (See P. indicus)										
	54		1088 (fruit)	Jan.-Apr.		31				
	54		976 (fruit)	Dec.-Feb.						
	54		880 (fruit)	Feb.-May		89				790 (fruit)

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
PTEROCARPUS SANTALINUS	54		560 (fruit)	Feb.-Apr.		58				140 (fruit)
PTEROCARYA CAUCASIA	54		6,400			5				
PTEROCARYA FRAXINIFOLIA (Caucasian wingnut)	7				92					
PTEROSPERMUM ACERIFOLIUM	54		1,920	Apr.						88
PTERYGOTA ALATA (See Sterculia alata)										
PUERARIA THUNBERGIANA (Kudzu)	32									
	58					57	dry	scarify	June	2,000
	72	30	10,800	late fall	80	26	dry	scarify	late spring	2,732
	73		12,637	late fall		82	dry	H ₂ SO ₄ 45 min. or scarify		
PURSHIA TRIDENTATA (Bitterbrush)	22 (1935)		22,680							
	60		18,000	July-Sept. early summer		69		stratify 90 days		
	77				66		dry	stratify	spring	
PUTRANJIVA ROXBURGHII (India amulet plant)	54		720 (fruit)	Feb.-Mar.						
PYRACANTHA (Fire thorn)	26							stratify	fall or spring	
PYRACANTHA COCCINEA (Scarlet firethorn)	46						dry, clean	stratify 90 days at 32-50°F.		
PYGEUM FLIGHTIANUM	54		260			80				
PYRUS CALLERYANA (Callery pear)	26									
	29		25,300				dry		spring	

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
PYRUS COMAUNIS (French pear)	7		15,181		92			stratify	fall or spring	
	8									
	26		12,500				dry, clean	stratify 90 days at 41-50°F.		
	29 46		42,000	Dec.-Feb.		78	dry, clean	stratify 100 days at 41-50°F.		
PYRUS PASHIA (Pashi pear)	54									
PYRUS SEROTIMA (Japanese late pear)	46						dry	stratify 50 days at 41-50°F.	spring	
PYRUS USSURIENSES (Ussurian pear)	26 46						dry, clean			
QUERCUS (Oak)	26						keep moist		irradi- ately fall or strat- ify	
QUERCUS AGRIFOLIA (Coast live oak)	32									
	60		200	fall		73				
QUERCUS ALBA (White oak)	1		154			81				
	19	60	210							
	32						moist, 32-45°F.		must be fall planted	
	46									
	72	90	170	fall	70			mulch	soon as ripe	41
	73	75	130	fall		70		none	immedi- ately	20

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germin. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
QUERCUS BICOLOR (Swamp white oak)	1 46		91			78	moist, 32-45°F.			
QUERCUS BOREALIS (Northern red oak)	1 19 20 72	74 80	95 160 105 114	fall	77	82			fall	32
QUERCUS CERRIS (European turkeyoak)	1		60			76				
QUERCUS CHRYSOLEILIS (Canyon live oak)	60		150	fall		56				
QUERCUS COCCINEA (Scarlet oak)	1		280			75				
QUERCUS DILATATA	54			Sept.-Oct.		93				
QUERCUS DOUGLASI (California blue oak)	60		180	Aug.-Oct.		72				
QUERCUS DUMOSA (California scrub oak)	60		100	June-Sept.		80				
QUERCUS DURATA (Leather oak)	60		100	Aug.-Sept.		50				
QUERCUS FENESTRATA	54		190	Nov.-Dec.						
QUERCUS GARRYANA (Oregon white oak)	77							stratify	spring	14
QUERCUS GLAUCA (Blue Japanese oak)	54		275	Nov.-Dec.		53				
QUERCUS GRIFFITHI	54		330			94				

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
QUERCUS IMBRICARIA (Shingle oak)	1		625							
QUERCUS ILEX	54		280	Dec.-Feb.		95				43
QUERCUS KELLOGGI (California black oak)	60		115	Sept.-Oct.		95				
QUERCUS LAMELLOSA	54			Nov.-Dec.		80				54
QUERCUS LAURIFOLIA (Laurel oak)	1		615							
QUERCUS LINEATA	54			Nov.-Dec.						40
QUERCUS LOBATA (Valley white oak)	60		75	Sept.-Oct.		24				
QUERCUS LIRATA (Overcup oak)	1		144			84				
QUERCUS MACROCARPA (Bur oak)	3 19 20		68	Aug.-Sept.				stratify dry, or stratify 30-160 days	fall fall, winter, spring	
	37 46						moist, 32- 45°F.			
	76		440	Aug.	70	52	cellar	stratify Oct.- Mar.	fall or spring	
QUERCUS MONGOLICA (Mongolian oak)	8		129							
QUERCUS MONTANA (Chestnut oak)	1 73		92 60	fall		82			immedi- ately	

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable plants lb. Seed
QUERCUS MUEHLENBERGI (Chinquapin oak)	1 54		520 290						
QUERCUS NIGRA (Water oak)	1		520						
QUERCUS PACHYPHYLLA	54			Nov.-Dec.					10
QUERCUS PALUSTRIS (Pin oak)	1 19	65	384		68				
QUERCUS PHELLOS (Willow oak)	1		597						
QUERCUS PONTICA	54		288						
QUERCUS PRINUS (Swamp chestnut oak)	1 15 19	40	70 195		87 50				151
QUERCUS ROBUR (English oak)	1 8		109 136		98				
QUERCUS RUBRA (Southern red oak)	1 12 46 73	100	700 685	Oct.	52	33-38°F. cold, moist			
	19	75	160	fall	85 70	none		fall or spring	10
QUERCUS SEMECARPIFOLIA	54		64	June-Aug.					
QUERCUS SEMISERRATA	54		65						
QUERCUS SERRATA (Bristletooth oak)	54		170	Sept.-Jan.	78				
QUERCUS SPICATA	54		256	Sept.-Oct.					

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds Per Pound		Cutt. Germ. Test %	Type of Storage	Type Treatment	Time to Plant	Usable Plants Lb. Seed
QUERCUS STELLATA	1		508		62				
	3		239						
	12	100	400	Aug.-Sept. Nov.	62		stratify	fall immedi- ately	
QUERCUS VELUTINA (Black oak)	1		218		76				
	15	40	400						
	25		264						
	46					85% humidity at 53-56°F.			
QUERCUS VIRGINIANA (Live oak)	72		180	fall	90				
	1		335						
QUERCUS WISLIZENI (Highland live oak)	60		100	Sept.-Oct.	40				

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
MA. PYRENAICA	78					60	dry	none	fall	
US. SATIVUS (d radish)	60		54,000	July-Nov.		96				
D. COLUMBARIS	71		1,031,818							
S. (buckthorn)	47							stratify	fall or spring	
	50							stratify	fall or spring	
IS. CALIFORNICA (California buckthorn)	60		2,000 dry fruits each containing 2 seeds			30		fresh seed none; stratify stored seed		
3. CATHARTICA (buckthorn)	7				98					
	11		23,381		76					
S. COLCHICA	15		25,980							
S. CROCEA (yellow buckthorn)	60		70,000	June-Sept.		60		none		
S. CROCEA V.R. (yellow buckthorn)	60		71,000	June-Sept.		73		fresh seed none; stratify stored seed		
S. DAHURICA (Siberian buckthorn)	3	22	24,000	Aug.-Sept.			dry	60-90 days at 41°F.	fall or spring	
	18		39,567							
S. DAHURICA (Siberian buckthorn)	72						sand and peat	alternating temperature over winter	spring	15,000
S. GRACILIS (Siberian buckthorn)	53	9	19,600	summer	99					

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
RHAMNUS PURSHIANA (Cascara buckthorn)	1		4,735							
	22		13,650							
	60		2,000							
	77	20	13,035	Sept.-Oct. summer	90	40	dry	stratify 90 days stratify		
RHAMNUS RUBRA	60		3,000 dry fruits each containing 2 seeds			16		fresh seed none; stratify stored seed	spring	
	54		528,000	Jan.-Mar.						
RHODODENDRON ARBOREUM (Tree rhododendron)	60		2,000,000	Aug.-Sept.		90		germinate in peat		
	60		4,000,000	July-Sept.		75		germinate in peat		
RHODOTYPOS KERRIODES (Jetbead)	46						dry	stratify 86°F. 30 days then 41°F. for 90 days		
	47							stratify	soon as ripe, or spring fall or stratify	
RHUS (Sumac)	50							stratify		
RHUS AROMATICA	58				94					
RHUS CISMONTANA	9		61,335		30					
	17					2				
	75	30		Sept.	18		dry		winter	50

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants lb. Seed
RHUS INTEGRIFOLIA (Mahogany sumac)	21		6,800	July-Oct.		84		H ₂ SO ₄ 4 hrs.		
	50		(seeds) 8,000 (dry fruits) 3,000							
RHUS LAURINIA (Laurel sumac)	21		129,600	Aug.-Sept.		32		hot H ₂ O		
	60		90,000							
RHUS MICROPHYLLA	17			summer		16	dry	none		spring
	75									
RHUS MONTANA	18		83,350							
RHUS OCCIDENTALIS (See R. glabra occidentalis)										
RHUS OVATA (Sugar sumac)	21		18,700	Sept.-Nov.		39		H ₂ SO ₄ 1-6 hrs.		
	60		26,000 seeds or 17,000 dry fruits							
RHUS PARVIFLORA	54		41,600	June-Apr.						
	3	50	10,500 6,900 (berries)	Aug.-Nov.				stratify 120 days 41°F. or H ₂ SO ₄ 20 min.	fall or spring	
RHUS TRILOBATA (Lemonade sumac)	9		17,855			38				
	14					16				
	17				85					
	18		24,950							
	21		11,800							
	28				26					
	35		29,333			35		H ₂ SO ₄ ½ hr.		
	37									
	75	20	30,000	summer Sept.	37		dry	stratify Nov.-Mar.	winter 2,450 fall or spring	
	76				62		dry			
	77		22,700	summer			dry	stratify	spring 1,100	

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants lb. Seed
RHUS TYPHINA (Staghorn surac)	2		22,090	Sept.		dry	H ₂ SO ₄ 2C min. then dry storage 50°F. 30 days stratify mulch	fall	1,800
RIBES SP. (Currant)	12 72 47 50	10	50,000 28,120	Nov.-Dec. throughout fall		dry	none stratify	spring fall or spring after stratification	
RIBES SP. (Gooseberry)	50						stratify	soon as ripe, or in spring after stratification	
RIBES AMERICANUM (American black currant)	46				74	clean, dry	stratify 200 days at 41-45°F.		
RIBES AUREUM (Slender golden currant)	3 77	4	200,000 231,086	summer summer		dry	90 days at 41°F.	fall or spring	
RIBES CYNOSBATI (Pasture gooseberry)	46					clean, dry	stratify 120 days at 34-38°F.		
RICINUS COMMUNIS (Common castor-bean)	54 60		2,080 800	Feb. Aug.-Nov.	67 78		none		
ROBINIA KELSEYI (Kelsey locust)	15 72		80,640 83,200	throughout fall					

Name	Réf. No.	Lb. Seed 100 lb Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
ROBINIA NEOMEXICANA (New Mexico locust)	9		21,807		97	10				
	13					26				
	17					50				
	35									
	75	19	21,440	fall	96		dry	H ₂ SC ₄ 15 min. H ₂ SO ₄	spring	1,250
ROBINIA PSEUDOACACIA (Black locust)	1		26,000			87				
	3	30	26,000	late fall			dry	H ₂ SO ₄ 20 min or scarify		
	7				75					
	9				94					
	12		22,000	Nov.		87	dry	scarify		
	15	33	15,760		98	43				
	16		20,185		99	56				
	17									
	18		32,732		96		dry	scarify	late spring	1,000
	32					60		H ₂ SO ₄ 45 min.		158
	35									
	37	3			49	80				
ROMNEYA COULTERI (Matilija poppy)	53				92	80				
	59		20,000	Aug.		80				
	60				69			shake 20 min.		
	61		24,000	throughout fall	96	52	dry			641
	72	33								
	73	31	25,000	early fall	82	49	dry	scarify	spring	1,322
	74	17	20,050	fall-winter	97	60	dry	H ₂ SO ₄ or none	spring	1,092
	75				98		dry	H ₂ SO ₄	spring	2,251
	76	6					dry	hot H ₂ O	fall or spring	493
	77	25	22,930	fall	97	86	dry	scarify	spring	1,616
	60		600,000	July-Sept.		20		stratify 90 days		

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Useable Plants Lb. Seed
ROSA (Rose)	19	14			85				Apr.	
ROSA ARKANSANA (Arkansas rose)	20	27								
	53		53,000							
	18		46,924							
	37									
ROSA CALIFORNICA (California wild rose)	60		102,000	Aug.-Nov.		62		stratify 90 days		
ROSA CANINA (Dogbrier)	7				87		clean, dry	stratify 270 days at 41-50°F.		
	8		23,590					stratify 90 days		
	46							stratify 210 days at 32-50°F.		
ROSA GYNOCARPA (Wood rose)	60		25,000	Sept.-Oct.	43		clean, dry	stratify 90 days at 41°F.		
ROSA HELENAE (Helen rose)	46						clean, dry	stratify 90 days at 37-50°F.		
ROSA HUGONIS (Hugonis rose)	46						clean, dry	stratify	spring	
ROSA HUMILIS (Pasture rose)	46						clean, dry		early spring	
ROSA LAEVIGATA (Cherokee rose)	3			fall						
	26		50,000					stratify 60 days		
ROSA MULTIFLORA (Japanese rose)	72		81,536		77					
	58		53,146							
	22		30,000	Sept.		50		stratify 90 days		
ROSA NUTKANLA (Nutka rose)	60		49,180	fall	36		dry	stratify 150 days at 40°F.		
	77	15								1,573

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Seed %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
ROSA FISOCARPA	22	15	71,520	fall	73		dry	stratify 150 days at 40°F.	spring	4,880
ROSA PRATINCOLA	77		24,540				clean, dry	stratify 1 yr. at 32-50°F.		
ROSA RUBRIFOLIA (Redleaf rose)	71						clean, dry; up to 3 yrs. or more OK	stratify 84 days at 32-50°F.		
ROSA RUGOSA (Rugosa rose)	46									
	46									
ROSA SETIGERA (Prairie rose)	72		52,000	through-out fall			clean, dry	stratify 100 days at 32-50°F.	immediately	2,610
	46						peat	stratify 2 yrs.	spring	
ROSA WOODSI FENDLERI (Fendleri rose)	72						clean, dry	stratify 300 days at 32-50°F.		7,000
ROSA SF. (Siberian rose)	46		61,550		98					
	18									
RUBUS (Raspberry)	20							stratify	Apr.	
(Youngberry)	23	3	118,941		85					
(Loganberry)	23	3	177,948							
(Raspberry)	23	4	316,851							
(Brainard)	23	4	173,328							
(Blackberry, dew-berry, raspberry)	37		151,503							
(Blackberry, dew-berry, purple cane and red raspberry)	46						clean, dry	stratify	soon as ripe or stratify	
(Blackberry)	50							stratify		

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Found	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
RUBUS ALLEGHENIENSIS	53		328,860		84					
RUBUS CANADENSIS (Thornless blackberry)	72	4	284,000	summer	70					
RUBUS CHAMAEMORUS (Cloudberry)	37	4					clean, dry	stratify 180 days at 55-50°F.		
RUBUS IDAEUS (European raspberry)	46						clear, dry	H ₂ CO ₄ 2 hrs.		
RUBUS LEUCODERMIS	23		422,168							
RUBUS OCCIDENTALIS (Common blackcap)	37	8								
RUBUS OCCIDENTALIS (Common blackcap)	72	3	384,000	summer	99					
RUBUS PARVIFOLIUS (Japanese trailing raspberry)	72			Aug.				mulch	soon as ripe	161
RUBUS STRIGOSUS (Red raspberry)	72	3	384,000	summer	99					
RUBUS THYRSANTHUS (Himalaya berry)	23	4	146,897							
RUBUS URSINUS	23		327,537							
RUDBECKIA HIRTA	71		1,746,153							
RUDBECKIA LACINIATA	71		252,222							
RUMEX ACETOSELLA	71		864,762							
RUMEX CRISFUS (Curly dock, yellow dock)	13		324,285			77				

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
RUMEX MEXICANUS	71	422,325								
RUMEX OCCIDENTALIS	71	567,500								
RUMEX PERSICARIOIDES	71	322,666								

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants lb. Seed
SACCOPE TALUM LONGIFLORUM	54		192	Aug.-Sept.		68				
SACCOPE TALUM TOMENTOSUM	54		1,040			48				
SAGERAEA ELLIPTICA (See Bocagea elliptica)										
SAGERITIA WRIGHTII	17					36				
SAGITTARIA LATIFOLIA (Arrowhead)	6			Sept.		46		H ₂ O at 33°F. 150 days		
SALIX (Willow)	2								immedi- ately	
	47								soon as ripe	
	50								soon as ripe	
SALSOLA TRAGUS	71		271,045							
SALVIA APIANA (White sage)	60		341,000	June-July		71		none; do not soak		
SALVIA COLUMBARIAE (Chia)	60		1,000,000	May-Aug.		28		none; do not soak		
SALVIA LEUCOPHYLLA (Whiteleaf sage)	21		412,300							
	60		304,000	June-July		54		none; do not soak		
SALVIA MELLIFERA (Black sage)	60		467,000	June-July		36		none; do not soak		
SALVIA SONOMENSIS (Creeping sage)	60			Aug.		25		stratify 90 days		
SALVIA SPATHACEA	60		27,400	June		26		none		

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Found	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
SAMBUCUS CAERULEA (Blue elder)	22 77	6	117,000 126,088	late summer	63		dry	stratify	spring	1,050
SAMBUCUS CALLICARPA (Red elder)	77	10	261,533	summer	79		dry	stratify	spring	
SAMBUCUS CANADENSIS (Elder)	2 3 12 15 19 20 37 46	13 10 12 8 8	175,000 202,000 468,220 203,666 323,754	fall July-Aug. Aug.	60 20		clean	stratify stratify 90 days stratify	fall or spring spring	
	48						clean, moist	stratify 85-100 days at 31-41°F. stratify 10 days at 32-40°F.	Nov.	
	58 72 73	18 7	250,000 220,200	fall early fall	99 68	13 13	clean, dry	depulp	immedi- ately or stratify	3,932 2,500
SAMBUCUS GLAUCA (See S. caerulea)	74	7								
SAMBUCUS NECKEXICANA (See S. caerulea)										
SAMBUCUS NIGRA (European elder)	8		175,909							
SAMBUCUS FUBENS (Scarlet elder)	53	4	303,000	summer	99					

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
SAMBUCUS RACEMOSA (Red elder)	2 8		52,727	fall				stratify	fall or spring	1,200
SANICULA MARILANDICA	71		58,961 (mericarps)			41				
SANTALUM ALBUM (Sandalwood)	54		3,120	May-Dec.						
SAPINDUS PTERGENS (See S. mukorossi)										
SAPINDUS DRUMMONDI (Western soapberry)	3	30	1,700 (500 with pulp)	fall	96		dry	H ₂ SO ₄ 2 hrs.		
	9		1,593		95		clean, dry	H ₂ SO ₄ 2 1/2 hrs.		165
	12		1,500			68				
	14					12				
	17									
	32						dry	hot H ₂ O	spring	
	37	82	685							
	74	60					dry	H ₂ SO ₄	spring	182
	75		1,980	Oct.						
SAPINDUS EMARGINATUS (See S. trifoliatus)										
SAPINDUS MUKOROSI	54		365	May and Dec.-Jan.						
SAPINDUS TRIFOLIATUS	54		1,040	Feb.-Apr.						10
SAPINDUS BACCATUS	54		17,600							
SAPINDUS SEBI FERUM (Chinese tallowtree)	12		3,600	fall	95		dry			
	32						dry	hot H ₂ O	spring	11
	54		3,840	Dec.-Feb.						
SAPONARIA OFFICINALIS (Bouncing Bet)	71		330,181	throughout fall	99		dry	mulch	fall or spring	23,000
	72		142,600							

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants lb. Seed
SARCOBATIS VERMICULATUS (Greasewood)	17					16		stratify with flesh		
SASSAFRAS VARIIFOLIUM (Sassafras)	2			late summer				stratify	soon as ripe or spring	
	47								soon as ripe	
	50									
SCHIMA WALLICHI	54		120,560	Feb.-Mar.		32				1,600
SCHINUS MOLLE (Peppertree)	17					46				
SCHLEICHERA TRIJUGA (See Cupania lessertiana)										
SCHREBERA SWIETENIODES	54		1,380	Feb.-Mar.		71				140 (fruit)
SCIADOPITYS VERTICILLATA (Umbrella pine)	8		17,090							
	26									
	46									
	51		19,500			4				
SCIRPUS AMERICANUS (Shore rush)	71		206,363				dry clean, dry	spring stratify 100 days at 63-70°F.		
SCIRPUS ATROVIRENS (Meadow rush)	71		6,485,714							
SCIRPUS NEVADENSIS	71		477,895							
SCIRPUS PALUDOSUS	71		139,692							
SCOPHULARIA LEPORELLA	71		3,242,857							

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants lb. Seed
SCUTELLARIA									
EATERIFLORA	71		1,135,000 (nutlets)						
SEDUM INTEGRIFOLIUM	13				66				
SEMECARPUS ANACARDIUM (Marking-nut tree)	54		400	Apr.-May	21				
SENECIO DOUGLASI (Creek senecio)	60			June-Oct.	93		none		
SEQUOIA GIGANTEA (See Sequia Washingtoniana)									
SEQUOIA SEMPERVIRENS (Redwood)	1 8 51 54		115,700 94,000 110,400		13 10 6				
SEQUOIA WASHINGTONIANA (Big tree)	1 46		92,293		24	clean, dry, sealed	stratify 60 days at 41° F.		
SESBANIA (Sesbania)	51 54 62 64		94,600 98,400 40,000		26 7 99				
SESBANIA AEGYPTIACA	54		51,200	Oct.-Mar.	47	dry	60 days at 41° F.	fall or spring	
SILVERBEECH ARGENTEA (Silver-buffaloberry)	2 3 9	5	67,314 35,000 43,700	July-Aug. fall			stratify 90 days at 41° F.	fall or spring second fall or second spring	10,000

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
SHEPHERDIA ARGENTEA (Silver buffaloberry) (Continued)	11		40,315		84			stratify		
	12		43,000		98	12				
	17		57,424		95					
	18		9,150 (fruit)		50	40		stratify H_2SO_4 $\frac{1}{2}$ hr.	Apr.	
	20	10						stratify	seen as ripe, or spring	
SHOREA	35					78	clean	stratify none	spring	
	37		18,000	June-Aug.	78			none	early spring	
	47		60,200	summer		63	dry	stratify Oct.-Mar.	fall or spring	775
	50	8		late summer	94		dry	stratify	spring	
	75	7	360			83				
SHOREA ASSAMICA	54		220 (fruit)	Apr.						
SHOREA OBTUSA	54		1,450 (fruit)	May		80				160 (fruit)
SHOREA ROBUSTA	54		375 (fruit)							
SHOREA SIAMENSIS	54		730							
SHOREA SUAVIS (See S. siamensis)										
SHOREA TALURA	54		400 (fruit)							
SHOREA THREBUGGALA	54		210 (fruit)							
SIDERANTHUS STINULOSUS	71		680,227							

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
SIDEROXYLON LONGEPETICLATUM	54		270							
SILENE ANTIPIRHINA	71		4,540,000							
SILENE FABARIA	71		1,135,000							
SILENE NOCTIFLORA	71		534,117							
SILMONDSIA CALIFORNICA (Pignut)	17					96				
SISYMBRIUM ALTISSIMUM	17		2,594,285							
SISYRINCHIUM ANGUSTIFOLIUM	71		756,666							
SISYRINCHIUM CALIFORNICUM	60		417,000	June		92				
SIUM CICUTAEOFOLIUM	71		756,666 (mericarps)				dry	none stratify	spring fall or	
SKIMMIA JAPONICA (Japanese skimmia)	47 50							stratify 90-120 days at 32-50 F.		
SMILACINA RACEMOSA (False solomnseal)	49									
SMILAX HERBACEA (Japanese smilax)	15 72	37 37	8,128 19,200	fall	99		dry	mulch	fall	1,500
SOJA MAX (Soybeans)	62		1250 to 7775							
SOLANUM DULCAMARA (Bitter nightshade)	72	8		Sept.	85					1,173

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germa. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
SOLANUM ROSTRATUM	71		197,391							
SOLANUM TRIFLORUM	71		394,782							
SOLIDAGO RIGIDA	71		1,006,688							
SONCHUS ARVENSIS	71		1,194,736							
SONNERATIA ACIDA	54		30,400							
SONNERATIA AFETALA	54		26,000	Aug.- Sept.						
SOHIA HARTVEGIANA	71		5,675,000							
SOHIA INTERMEDIA	71		3,492,307							
SOHIA PARVIFLORA	71		3,783,333							
SOHORA (Sephora)	47						dry	soak in hot H ₂ O	soon as ripe, or spring	
SOHORA JAPONICA (Chinese scholar tree)	7				65					
	8		4,136							
	12		4,080		97		dry	scarify		
	17			fall		48				
	19	17								
SORBARIA (False spirae)	50							stratify	soon as ripe, or stratify	

Name	Ref. No.	Lb. Seed per 100 lb. Fruit	No. Clean Seeds per 1000	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants per Lb. Seed	
SORBUS AMERICANA (Mountain ash)	2		236,300	Aug.	98			stratify 60-120 days at 34°F.			
	18	1	83,500							225	
	19				54						
	20		160,640	fall	85						
	72		1,045								
SORBUS ARIA (White beamtrees)	8										
	15	7	104,750	fall	99						
	45										
SORBUS AUCUPARIA (European mountain ash)	46						dry, cool; OK up to 2 yrs. clean, dry, room temperature	stratify 34-41°F. 60-120 days		2,090	
	22		144,400								
	60		66,400	Sept.		21		stratify 120 days at 32°F.			
			seeds, or 6,210 dry fruits								
			68,925	fall	81		dry	stratify 120 days at 40°F.	spring	2,073	
SORGHASTRUM NUTANS (Indian grass)	77	2	196,010			57					
	64										
	62		27,000								
	62		13,000								
	62		2,000								
SORGHUM VULGARE Broomcorn Feterita Hegari Milo	62		15,000								

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants 100 Seed
SORGHUM VULGARE (Continued)										
Sorghum	62		28,000			81				
Sorghum	63		24,960							
Sorghum	64									
SORGHUM VULGARE VAR. CAFFRORUM (Kafir)	62		28,000							
	63		22,730							
SORGHUM VULGARE VAR. SUDANENSE (Sudan grass)	62		55,000			76				
	63		54,400							
	64									
SOYMIDA FEBRIFUGA	54		4,720	May-Aug.		28				1,450
SIAPTUM JUNCUM (Spanish broom)	60		30,000	July-Sept.		14		hot H ₂ O		
SPARTIUM SCOPARIUM (See Cytisus scoparius)										
SPHAERALCEA AMBIGUA	60		849,000	June		25		none		
SPIRAEA (Spiraea)	47							none	soon as ripe, or spring	
	50							stratify	soon as ripe, or stratify	
SPIRAEA DOUGLASI (Douglas spirea)	22		1,030,400							
SPIRAEA SALICIFOLIA	71		5,675,000							

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Found	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
SPONDIAS AXILLARIS	54		180	July-Aug.		3				57
SPONDIAS MANGIFERA	54		130	Dec.-May						
STACHYS FALUSTRIS	71		585,806 (nutlets)							
STAPHYLEA (Bladdernut)	47							stratify	soon as ripe, or spring	
	50							stratify	soon as ripe, or stratify	
STAPHYLEA BOLANDERI (Sierra bladder nut)	60		13,000	July-Aug.		16		H ₂ SO ₄ 1 hr.		
STAPHYLEA COLCHICA (Colchis bladdernut)	54		5,600							
STAPHYLEA PINNATA (European bladdernut)	15		12,550	fall			dry	mulch	fall	2,500
STAPHYLEA TRIFOLIA (American bladdernut)	19	94								
STENOTOPSIS LINEAR-IFOLIUS	60		233,000	May-July		24		none		
STEPHEGYNE DIVERSIFOLIA (See Mitragyna diversifolia)										
STEPHEGYNE PARVIFOLIA (See Mitragyna parvifolia)										
STERCULIA ALATA	54		568	Feb.-July		63				90

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per 1000	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
STERCULIA CAMPANULATA	54		2,240	May		24				
STERCULIA COLORATA	54		4,160							
STERCULIA FOETIDA	54		288							
STERCULIA FALLENS	54		2,880	May-June		85				
STERCULIA FLANTANIFOLIA 12 (Japanese varnish tree)			2,250	Aug.	98		dry		fall or spring	
STERCULIA URENS	54		2,400		76					
STERCULIA VERSICOLOR	54		1,600			50				
STERCULIA VILLOSA	54		2,640	Apr.-May		72				
STEREOSPERMUM CHELENOIDES	54		13,760	Dec.		1				
STEREOSPERMUM SUAVEOLENS	54		12,400	Dec.-Apr.		28				1,300
STEREOSPERMUM XYLOCARFUM	54		3,520							
STEWARTIA (Stewartia)	47							soak, stratify	soon as ripe, or spring soon as ripe	
STIZOLOBIUM DEERINGIANUM (Velvet bean)	62		960							

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time Usable to Plants Plant Lb. Seed
STROPHOSTYLES HELVOLA	61			Sept.		79	dry	H ₂ SO ₄ ½ hr.	spring
STRYCHNOS NUXVOMICA	73		336	Dec.-Feb.		31			
STYRAX (Snowbell)	54							stratify	fall or spring
	50							stratify	soon as ripe
STYRAX CALIFORNICA (California snowbell)	60		1,000; (500 dry fruits)	Aug.-Oct.		23			
STYRAX JAPONICA	46						clean, dry	stratify 90 days at 32-50°F.	
STYRAX OBASSIA (Fragrant snowbell)	46						clean, dry	stratify 90 days at 32-50°F.	
SWIETENIA MACROPHYLLA	54		992	Feb.-Apr.		32			
SWIETENIA MAHOGONI (Mahogany)	54		1,600	Oct.-Dec.					
SYMPHORICARPOS ALBUS (Snowberry)	2			Aug.			moist or dry	75 min. H ₂ SO ₄ then 180 days at 41°F.	
	15	20	72,520						
	18		95,650						
	19	3			73			75 min. H ₂ SO ₄ , or 120 days stratified at 77°F.; or H ₂ SO ₄ + 3 wks. at 77°F.; then 180 days at 41°F.	Nov.
	20					75	clean	stratify 68°F. 90 days; then 41°F. 180 days or H ₂ SO ₄	
	38								
	46								

	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
SYMPHORICARPOS ALBUS (Snowberry) (Continued)	60		54,000 (18,000 dry fruits)	Oct.- Nov.						
	72	3	71,600	fall	73					
	77	3	53,600	fall	89		dry	stratify	spring	
SYMPHORICARPOS MOLLIIS (Spreading snowberry)	60		18,000 (dry fruits)	Sept.- Oct.						
	3	7		fall				75 min. H_2SO_4 , then 90-120 days at 41 F.		
SYMPHORICARPOS OCCIDENTALIS (Western snowberry)	71		77,606							8,600
	75		52,000		84		dry	stratify 270 days	summer or stratify	
SYMPHORICARPOS ORBICULATUS	2			Aug.						176
							dry or stratify	H_2SO_4 75 min., then 180 days at 50°F.	spring germina- tion second year	
	3	7		fall				H_2SO_4 75 min., then 90-120 days at 41°F.		
SYMPHORICARPOS OREOPHILUS (Mountain snowberry)	15	20	407,680							2,600
	58									
	72	18		fall	96		dry	(Germination second year)	fall	
	73			fall	80				immedi- ately	
	75	9		summer	50			dry		

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Found	Time to Collect	Cutt. Test %	Germ Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
TALAUMA PHELLOCARPA	54		5,120	Sept.		4				
TAMARIX ARTICULATA	54		150,400	Dec.-Feb. and July						
TANACETUM CAMPHORATUM	60		1,000,000	June-Aug.		1		none		
TARAKTOGENES KURZI	54		150	May-Dec.		32				
TAXODIUM DISTICHUM (Bald cypress)	1 8 12 37 46	49	2,981 4,545 3,000		65	65		stratify		
							clean, dry	stratify 30 days at 32-50°F.		
				fall	50		dry	stratify 30 days	spring	100
					17		dry	none	spring	
TAXUS (Yew)	22 26 47		98,000					stratify	fall or spring winter or	
								stratify	spring (under glass)	
								stratify 1 yr.	scon as ripe	
TAXUS CANADENSIS (Canada yew)	50 72		17,280	fall	99					
TECCMA RADICANS (See Bignonia radicans)										
TECONIA UNDULATA	54		42,160	May-Aug.		28				2,250

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
TECTONA GRANDIS (Teak tree)	54		9,875	Nov.-Mar.		37				375
TEINOSTACHYUM HELPERI	54			Feb.-Mar.						
TEPHROSIA CANDIDA	54		25,200	Nov.-Mar.		60				
TEPHROSIA PURPUREA	54		40,800			5				
TEPHROSIA TINCTORIA	54		26,400			10				
TEPHROSIA VOGELI	54		7,840							
TERMINALIA ARJUNA	54			Dec.-May		61				27(fruit)
TERMINALIA BELERICA	54		190	Feb.-Apr.		59				99
TERMINALIA CHEBULA	54		360	Nov.-May		60				180
TERMINALIA CITRINA	54		230(fruit)			39				
TERMINALIA CRENULATA (See T. tomentosa)										
TERMINALIA MYRIOCARPA	54		241,600 (fruit)	Dec.-Mar.		9				
TERMINALIA OLIVERI	54		2,400 (fruit)							
TERMINALIA FALLID	54		176 (fruit)							
TERMINALIA FANICULATA	54		19,520	Dec.-May		2				23(fruit)
TERMINALIA PROCERA	54		352 (fruit)							240

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Found	Time to Collect	Cutt. Test	Germ. Test	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
THUJA ORIENTALIS (Oriental arborvitae)	1		25,000							
	52		17,920							
	77	12	303,000	Sept.		37	clean, dry	stratify 60 days at 32-50°F.		
	1	2	360,000			62				
THUJA FLICATA (Western red cedar)	8		369,545							
	46									
	51		321,600		49					
	54		350,000							
THUJOPSIS DELABRATA (False arborvitae)	65		307,200			50	dry	stratify 30-60 days at 32-50°F.		
	77	5		fall	69		dry		spring	
	47							none	spring	
	50							stratify	seen as ripe, or stratify	
TILIA AMERICANA (See T. glabra)										
TILIA GLABRA (Basswood)	1		6,000			71				
	12		3,500							
	16		4,718	fall	90					
	18		7,273		97					
	19		2,766		79					
	20			fall	87					
	36	23			85			stratify 1 yr.	Nov.	
	37							stratify 1 yr.		
	39	94						moist peat 68°F.		
								120 days or 20 min. H ₂ SO ₄ , followed by 90-150 days at 34-41°F.		

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants per Seed
TILIA GLABRA (Basswood) (Continued)	42							air dry 120-150 days; remove pericarp with HNO ₃ , then 20 min. H ₂ SO ₄ , then stratify moist sterile peat at 35-41°F.; plant after germination		
	47							stratify 41°F. over winter	soon as ripe	
	50							stratify	soon as ripe, or stratify	
	73	90	6,000	fall	25	low	dry or moist peat dry	HNO ₃ and H ₂ SO ₄	spring	
	74	80		fall				stratify Mar.-Nov.	second fall	
	76	83								
TORREYA (Torreya)	47							stratify	winter or spring (under glass)	
	60		140	Sept-Nov		92		stratify 90 days		
TORREYA CALIFORNICA (California nutmeg)										
TOXYLON POMIFERUM (See Maclura pomifera)										
TRADESCANTIA OCCIDENTALIS	71		151,333							
TRAPA NATANS (Water chestnut)	6			Oct.		92		180 days H ₂ O at 35°F.		

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Found	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants lb. Seed
TREMA ORIENTALIS	54		163,200		1					900
TREWEA NUJIFLORA	54		1,952	July-Dec.	69					
TRIFOLIUM AGRARIUM (Hop clover)	62		830,000							
TRIFOLIUM FRAGIFERUM	72		282,000	Aug.	90			none or scarify	spring	
TRIFOLIUM HYBRIDUM (Alsike clover)	62 63 64		700,000 680,320		87					
	72		700,000	Aug.	87			none or scarify	spring	
TRIFOLIUM INCARNATUM (Crimson clover)	62 63		150,000 149,600							
	72		125,000					none	spring	
TRIFOLIUM IRATENSE (Red clover)	62 63		250,000 272,160							
	72		250,000	Sept.	87				spring	
TRIFOLIUM REPENS (White clover)	62 63 64		700,000 680,320							
	72		700,000	Aug.	85 82			scarify	spring	
TRIFOLIUM RESUTINATUM (Strawberry clover)	62		330,000							
TRIFTERIS PACHYTERIS	75									
TRITICUM AESTIVUM (Wheat)	62 63		16,000 11,328	spring	30		dry	none	spring	
TSUGA BRUNONIANA	54		187,760	Sept.-Dec.	88					10,400

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Found	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
TSUGA CANADENSIS (Eastern hemlock)	1 8 15 26 43	3 4	190,527 159,500	fall fall	52	44				816
TSUGA CARLINIANA (Carolina hemlock)	43					13	dry	none	early spring	
TSUGA HETEROPHYLLA (Western hemlock)	1 43	3	299,437			18		30 days at 43°F.		
TSUGA MERTENSIANA (Mountain hemlock)	1 51		154,955 302,600			46		none		
TURFINIA FCMIFERA	54		4,000			46				
TYFHA LATIFOLIA (Cattail)	6			Aug.		65		210 days dry at room temperature		
ULEX (Gorse)	47 50						dry	none	spring spring	
ULEX EUROPAEUS (Gorse)	8 51		67,272 66,500			58				
ULMUS ALATA (Winged elm)	37 74	42 43	85,640	spring			dry	none	spring	1,330
ULMUS AMERICANA (American elm)	1 3	50	94,600 95,000	spring		71	low temper- ature; hu- mid air		first or second spring immedi- ately	
	12	100	53,000	Apr.		71				

12 100 53,000 Apr- 71

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants lb. Seed
ULMUS AMERICANA (American elm) (Continued)	16							dry 2 days	immediately	733
	27							dry 32-50°F., humid air	immediately or second spring	
	32							dry or plant immediately		
	37	45	116,779		90	78	23-41°F. OK to 16 mos. if dried to 7% H ₂ O and sealed	stratify 1 mo. at 41°F.		
	59					80				
ULMUS CAMPESTRIS (English elm)	74	37	78,348	late spring	93	18	dry	none	spring	1,867
	76	100	56,000	late spring	85	80	dry	dew	immediately	500
	8		57,000							
ULMUS CRASSIFOLIA (Cedar elm)	37	25		fall					immediately	
	64									
ULMUS FULVA (Slippery elm)	1		54,000				50°F., humid air		immediately or second spring	
	2		54,000	May						
	16		35,221		95	9		dry 2 days		

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants lb. Seed
ULMUS FULVA (Slippery elm) (Continued)	36	24	39,270	late spring		dry	none	fall	459
	37			spring			stratify 1 yr.	second spring	459
	50				90				
	59								
ULMUS GLABRA (Scotch elm)	8		16,409						
	3		50,000	Sept. late summer		cold, dry dry		spring	1,160
ULMUS PARVIFOLIA (Chinese elm)	77			spring		dry, low temperature		first or second spring	186
	3	15	55,000				stratify	second spring	
ULMUS PUMILA (Dwarf Asiatic elm)	16		55,240		89				
	20				90				
	35				25		room temperature tight, 1 yr. OK		
	37		54,898		77				2,207
ULMUS SEROTINA (Red elm)	59	27	66,006	late spring	80	dry	none	spring	2,120
	74	15	72,000	spring	87	dry	none	immedi-ately	5,272
	75	100	25,000	late spring	91	dry	dewling	immedi-ately	403
	76		40,000	late spring	83	dry		spring	2,400
	77			spring	84	dry			
	1		148,778						

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
ULMUS WALLICHI	54		76,800						
UMBELLULARIA CALIFORNICA (California laurel)	60		300	Oct.-Dec.	41		stratify 90 days		
UROSAEPHUS LINEARIFOLIUS	60		216,000	May	71		none		
URTICA GRACILIS	71		4,323,809						
URTICASTERUM DIVARICATUM	71		349,230						

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
VACCARIA VULGARIS	71		51,590							
VACCINIUM (Blueberry)	2			spring and summer				stratify until Jan. then 55-70°F.		
	19 47	2					dry	none	winter or spring (under glass) soon as ripe	
VACCINIUM CORYMBOSUM (Highbush blueberry)	50						clean			
	50						clean		soon as ripe	
VACCINIUM MACROCARPON (Cranberry)	72	2		summer						
	15 50		469 (berries)		90			stratify	spring	
VACCINIUM OVALIFOLIUM (Big whortleberry)	22		1,606,200							
VACCINIUM OVATUM (Evergreen huckle- berry)	22 60 77		1,701,100 3,000,000	Aug.-Sept. late summer		18		stratify 90 days		
VACCINIUM PERNSYLVANICUM (Low sweet blueberry)	19	1	1,941,408	summer	62					
VALLISNERIA AMERICANA (Bel grass)	6			Sept.		87		120 days H ₂ O at 35-68°F.		
VATERIA INDICA	54		27 (fruit)	May-Aug.		30				

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
VERBASCUM THAPSUS	71		5,044,444							
VERBENA BRACTEOSA	71		908,000 (nutlets)							
VERBENA HASTATA	71		1,418,750 (nutlets)							
VERBENA STRICTA	71		534,117 (nutlets)							
VERBENA URTICIFOLIA	71		955,789 (nutlets)							
VERBESINA ALTERNIFOLIA	71		126,111							
VERONICA PEREGRINA	71		15,133,333							
VIBURNUM (viburnum)	2			fall				stratify	fall or spring	
	9							stratify 1 yr.		
	50							stratify 1 yr.	second fall	
VIBURNUM ACERIFOLIUM (Mapleleaf viburnum)	15 19 46	31	4,342 (berries) 12,680	fall	86		clean, dry or in fruit moist peat	stratify 150 days at 32-50°F.		
	57							120-150 days at 70°F., then 90 days at 41°F.		
VIBURNUM AMERICANUM (American cranberrybush)	19 48	7		early fall				stratify 60 days at 68°F., then 60 days at 40-50°F.	immediately	

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
VIBURNUM AMERICANUM (American cranberry- bush) (Continued)	58 72 15 72 15 19 46 57 58 72	9 30 25	11,000 28,800 17,904	fall fall	54 99 58 99 92 91	dry store in fruit moist peat sand and peat	(Germ. 2nd yr.) stratify 120-150 days at 32-50°F. 120 days at 70°F., then 60 days at 41°F.	spring	1,722
VIBURNUM CASSINOIDES (Witherod)									
VIBURNUM DENTATUM (Arrowwood)									
VIBURNUM DILATATUM (Linden viburnum)	46 53 57		32,600	fall	98	clean, dry or in fruit dry moist peat	stratify 120 days at 32-50°F. (Germination second year) 90 days at 70°F., then 60 days at 41°F.	spring	1,043 190 2,200
VIBURNUM LAETANA (Wayfaring tree)	46 53		13,200	late summer	95	clean, dry or in fruit.	stratify 120 days at 32-50°F.		
VIBURNUM LENTAGO (Nannyberry)	3 15 18 19 20	50 9	2,160 4,320 12,450 6,804 4,914	Aug.-Sept.	87 62		stratify 1 yr. stratify	second fall Apr.	

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
VIBURNUM LENTAGO (Nannyberry) (Continued)	46						clean, dry or in fruit	stratify 90 days at 32-50°F.		
	57	23	6,250 10,000	fall fall	92 94		moist peat	90 days at 70°F., then 90-120 days at 41°F.		
	72 76						dry	stratify Nov.-June 30 days at 70°F.	June	209
	57									
VIBURNUM NUDEM (Smooth wythe-red)										
VIBURNUM OPULUS (European cran- berrybush)	15 46	33	16,128				clean, dry or in fruit	stratify 90 days at 32-50°F.	immedi- ately	
	48			early fall			moist peat	stratify 60 days at 68°F., then 60 days at 40-50°F. 60 days at 70°F., then 60 days at 41°F.		
	57									
	72 77	7	12,200 12,200	fall or winter late summer	99					
VIBURNUM FRUNIFOLIUM (Blackhaw)	12	50	4,200	Oct.		95	clean	stratify	immedi- ately	
	19 20	23			60			stratify	Apr. or second fall	
	57						moist peat	120-180 days at 70°F., then 30 days at 41°F.		
	58 72	20	5,500	fall	97 94					

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants lb. Seed
VIBURNUM RHYTHIDONYLLUM (Leatherleaf viburnum)	53 72		15,600 26,400	late summer	99					
VIBURNUM RUFIDULUM (Southern blackhaw)	57									
VIBURNUM SARGENTI (Sargent cranberry- bush)	72		8,770	fall	99		moist peat	120-150 days at 70°F., then 60 days at 41°F.		
VIBURNUM SCABERELLUM	57						moist peat	30 days at 70°F.		
VIBURNUM THEIFERUM (Tea viburnum)	46						clean, dry or in fruit	stratify 120 days at 32-50°F.		
VIBURNUM WRIGHTII (Wright viburnum)	46						clean, dry or in fruit	stratify 120 days at 32-50°F.		
VICIA AERICANA	53 72		15,600 41,314	late sum. early summer	99 90			none	spring	
VICIA ANGUSTIFOLIA	71		24,945							
VICIA ATROPURPUREA (Purple vetch)	62		12,000							
VICIA CALCARATA (Bard vetch)	62		13,000							
VICIA DASYCARPA (Woollypod vetch)	62		10,500							
VICIA FULGENS	72		9,534		92			none	spring	
VICIA MCNANTHA (Mcnantha vetch)	62		9,300							

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
VICIA MARBONENSIS	72		4,086			88		none	spring	
VICIA PANNONICA (Hungarian vetch)	62		10,300							
VICIA SATIVA (Common vetch)	62 63 72		6,850 8,608 8,600			95		none	spring	
VICIA VILLOSA (Hairy vetch)	62 63 64 72		20,800 16,000 16,300	summer		88 92		none	spring	
VICIA VILLOSA (Smooth) (Smooth vetch)	62		20,800							
VICINA SINENSIS (Cowpea)	62 64		2,900			70				
VITEX (Chaste-tree)	26 47			fall			dry	none stratify	spring spring	11
VITEX ALTISSIMA	54		6,080	July-Aug.						
VITEX GLABRATA	54		2,080	June-Aug.		40				580
VITEX NEGUNDO (Negundo chaste-tree)	3 14	75	59,200	July-Oct.		38		stratify few weeks none	spring spring	
VITEX PEDUNCULARIS	54		2,520	July-Aug.		15	dry			
VITIS (Grape)	12 15 16 19	20	12,800 14,233 48,127	Oct.	85 37		clean	stratify		

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test. %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
VITIS (Grape) (Continued)	20	6	19,897		81				Nov.	
	37							stratify	spring	
	47	13			85	84		stratify	fall or	
	50				90				stratify	
VITIS ARIZONICA (Canyon grape)	75		11,000	late summer			dry	none	spring	
VITIS CALIFORNICA (California grape)	60		11,000 (3,500 dry fruits)	Sept.-Oct.		74		none		
VITIS CORDIFOLIA (Frost grape)	72	14	17,000	fall	90					
VITIS ROTUNDIFOLIA	58				84					
VITIS VULPINA (Riverbank grape)	2			Sept.			dry and clean			
	18		17,210		90					
	72		7,400	fall	99					
	76	10	14,500	Sept.	98	96	dry	stratify Nov.-Mar.	spring	

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
WASHINGTONIA LONGISTYLIS	71		37,833 (mericarps)							
WEIGELIA (See Diervilla)										
WENDLANDIA EXSERTA	54		382,400	June						
WISTERIA (Wisteria)	26 47			summer			dry dry	soak none	spring spring	
WISTERIA SINENSIS (Chinese wisteria)	8 26		1,227	summer			dry	soak	spring	
WOODFORDIA FLORIBUNDA	54					280 (per dram)				
WRIGHTIA TOMENTOSA	54		26,400	Dec.-Feb.						
WYETHIA HELLENIOIDES	60		10,000	Aug.-Sept.		36		none		
WYETHIA MOLLIS (Woolly mule-ears)	60		25,000	Sept.-Oct.		16		none		

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Pound	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to Plant	Usable Plants Lb. Seed
YUCCA ANGUSTISSIMA	17					78				
YUCCA BICOCCATA (Banana yucca)	17					78				
YUCCA FLATA (Soapweed)	17 72		15,000			78 90				
YUCCA GLAUCA (Soapweed yucca)	13					32				
YUCCA HARRINMANIAE	17					58				
YUCCA SCHOTTII	17					28				
YUCCA WHIPPLEI (Chaparral yucca)	60		27,000	throughout summer		85		none		
ZANTHOXILIZA APIIFOLIA (Yellowroot)	47						dry	none	spring	
ZANTHOXILUM AMERICANUM (Prickly ash)	47						dry	none	spring	
ZAUSCHNERIA GALLI FORTICA (Mexican balsamea)	60		1,000,000	fall		68		none		
ZEA MAYS (Corn)	62		1,200							
ZEA MAYS (Popcorn)	62		3,000							
ZELKOVA KEAKI (See Z. serrata)										
ZELKOVA SERRATA (Sawleaf zelkova)	8 46		26,727				clean, dry	stratify 90 days at 32-50°F.		
	54		20,800							

Name	Ref. No.	Lb. Seed 100 lb. Fruit	No. Clean Seeds per Found	Time to Collect	Cutt. Test %	Germ. Test %	Type of Storage	Type of Treatment	Time to plant	Usable Plants Lb. Seed
ZIZIA CORDATA	71		263,188							
ZIZYPHUS JUJUBA (Jujube)	17 26 54 75		704	late fall early fall Jan.-Nov. Oct.		70 31		remove from shell stratify crack hull	spring spring	220
ZIZYPHUS LYDIOIDES (Lete bush)	17					8				
ZIZYPHUS XYLOPYRA	54		96	Feb.-Mar						10
ZYGADENUS CHLORANTHUS	71		535,806							