Dear Friends,

We hope you had a productive 2015 and are looking forward to the year ahead. Please let us know how we can assist you in your nursery for 2016.

Chris Kiratzis and Bob Nicholl

Our Abies fraseri seed orchard located in the mountains of North Carolina. There was a bumper crop of cones this fall.
Specializing in Christmas Tree Management

**DOUGLAS FIR (Pseudotsuga menzeisii)**

Site requirement -- Adapted to low fertility soils but requires good air and soil drainage. Does well in driest sites of the Northeast U.S.

**San Juan N.F. Southern Colorado:**
Similar rapid growth of Lincoln N.F. (Sacramento Mts.) more blue in color and slightly more open crown. (36,000)

**Price / lb**
$140.00
sold out

**Pal~Select Lincoln N.F.:**
Southern New Mexico, Sacramento Mts.: Highly selected and tested local areas for best shape, density and minimum shearing; quality rapid growth and blue/green to dark green color; Adelgid and Gypsy moth resistant. (34,000)

**Price / lb**
$100.00

**Santa Fe N.F.:**
North-central New Mexico, select canyons, western district: Similar to Sacramento Mts. but more blue in color and slightly slower growing. (36,000)

**Price / lb**
$130.00
sold out

**Pal~Select Shuswap Lake Region. B.C.:**
We select local stands for best Christmas tree quality, High adelgid and rhabdocline resistance, long needles, dark green color and small buts. (42,000)

**Price / lb**
$135.00
sold out

**CONTENT NOTES:**
1. N.F. National Forest
   Some stands are on private holdings within or adjacent to the National Forest.

2. (20,000) Approximate number of seeds per pound are in parentheses at the end of most seed listings.

*Cover Photo: Abies fraseri cones cut to show the tremendous seed set we had on the Roan Mountain orchard this fall.*
TRUE FIRS (Abies)

**BALSAM FIR (A. balsamea)**

*Nova Scotia:*

**Cooks Blue Improved:**
Collected from a grafted seed orchard

<table>
<thead>
<tr>
<th>Price / lb</th>
<th>Supply</th>
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<tbody>
<tr>
<td>$130.00</td>
<td>sold out</td>
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<tr>
<td>$115.00</td>
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**BULGARIAN FIR (A. borisii regis):**
We inspected this species in Macedonia. It appears similar to Fraser Fir but more tolerant to drought. (6,800)

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<thead>
<tr>
<th>Price / lb</th>
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<tbody>
<tr>
<td>$70.00</td>
<td>limited supply</td>
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**CONCOLOR FIR (A. concolor)**

*Pal~Select Cibola N.F.:* Central New Mexico, Sandia Mts., select canyons. - Fast growth, best blue of all selections ever made and most drought resistant. (10,419)

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<thead>
<tr>
<th>Price / lb</th>
<th>Supply</th>
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<tbody>
<tr>
<td>$85.00</td>
<td>sold out</td>
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<tr>
<td>$70.00</td>
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*San Juan N.F.:* Southern Colorado

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*Santa Fe N.F.:* Central New Mexico, Rio Las Vacas and nearby area - Fast growth, very blue, longest needle. (14,000)

*Lincoln N.F.:* New Mexico - Best growth rate, excellent shape and density but not as blue as other sources. Indications are that this selection is most resistant to root rot. (14,950)

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<thead>
<tr>
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<tbody>
<tr>
<td>$55.00</td>
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**CORKBARK FIR: (A. lasiocarpa var. arizonica):**

*Apache N.F.:* Arizona

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<tr>
<td>$150.00</td>
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**FRASER X BALSAM HYBRID (A. Fraseri x Balsamea):**
Collected from a New England Seed Orchard

<table>
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<tr>
<th>Price / lb</th>
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</thead>
<tbody>
<tr>
<td>$175.00</td>
<td>limited supply</td>
</tr>
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</table>
FRASER FIR (A.fraseri)
North Carolina: Roan Mountain, seed orchard. $150.00
North Carolina: Roan Mountain, wild stands -lower germination
2006 Crop Year 33% germination : $110.00
North Carolina: Mt. Rogers Seed Orchard, very uniform quality. $180.00

GRAND FIR (A. grandis)
Clearwater N.F. Idaho: $78.00

INTERMEDIATE (CANAAN) FIR (A. intermedia)
Pennsylvania Seed Orchard: 50% germination : $300.00
Excellent growth rate, bluish color, 24% : $120.00
dense crown form, high needle density 16% : $75.00
on twigs. On going tests show tolerance
for less moisture and higher
temperatures than Fraser. (46,000)

NORDMANN FIR (A. nordmanniana)
Bout, France: Cloned Seed Orchard Also known as
Caucasian fir, similar to Abies alba and Abies bornmuelleriana. $90.00
sold out

TURKISH FIR (A. bornmuelleriana)
Bolu-Aladag, Turkey: Native to the mountains of
Northwestern Turkey. Breaks bud slightly earlier than
Nordmann with a faster growth rate, also some tests have
shown resistance to root rot. (7,500)
France Seed Orchard Selection: Clones from Turkish
provenances. Selected for good homogeneity, better vigor and
growth rate, later bud flushing and frost hardiness. $105.00
sold out
PINES (Pinus)

**AUSTRIAN PINE (P. nigra)**
**Pal~Select:**
Macedonia Seed Orchard, high density, excellent shape & dark green foliage. (20,000)  
Price / lb  
$ 85.00

**EASTERN WHITE PINE (P. strobus)**
**Lake States:** (23,000)  
Typical growth, mid range variety.  
Michigan: (25,878) 2008 crop year, 66% germination  
Price / lb  
$ 90.00

**PONDEROSA PINE (P. ponderosa)**
**Santa Fe N.F. & Lincoln N.F., New Mexico:**  
Exceptionally long blue/green needles, good growth rate, shape, density and excellent stem form. Very suited to low fertility and dry sites such as mine spoils and drier landscapes. (12,250)  
Price / lb  
$ 50.00

**RED PINE (P. resinosa)**
**Lake States:**  
Uniform genotype all purpose tree. (55,000)  
Price / lb  
$ 100.00

**SCOTCH PINE (P. sylvestris)**
**Macedonia Seed Orchard:**  
Select, progeny tested, has blue green needles, best stem quality of all Scotch pine, fast growth, needle disease resistant. (76,200)  
Price / lb  
$ 100.00

**SOUTHWESTERN WHITE PINE (P. strobiformis)**
**Lincoln N.F. Southern New Mexico:**  
Beautiful natural shape for landscape and Christmas trees. Resistant to White pine weevil, 3+ years needle retention, stiff branches, fast growth. Must shear early in season - no later than June 15. Tested in retail lot. Customers preferred over Eastern White Pine. (4,300)  
Price / lb  
$ 40.00
BLACK HILLS SPRUCE (P. glauca densata)
South Dakota:
Excellent natural shape, practically no shearing required, relatively slow growing, well adapted to Northeast U.S. Prized as an ornamental and for Christmas trees. (170,000)

Price / lb
$ 225.00
sold out

BLUE SPRUCE (P. pungens)
San Juan N.F. Southern Colorado:
Select area, very blue, fast growth. (100,000)

Price
$ 125.00

Pal~Select Santa Fe N.F.:
Central New Mexico highly selected for color and shape, 90% very blue. Tendency toward more upright branching; needles not so sharp as San Juan. (100,000)

Price
$ 100.00

Apache N.F. Arizona:
Very blue, fast growth, upright branching, not as dense as Sante Fe.

Price
$ 120.00
sold out

ENGELMANN SPRUCE (P. engelmanni)
Excellent landscape and Christmas tree. Has excellent blue color, natural shape and density. Adapted to cold, moist well-drained sites.

Pal~Select Special:
Our progeny tested 1988 selection for best shape and density, growth rate, and superior traits for Christmas tree and ornamentals. Requires practically no shearing. (91,500)

Price
$ 155.00
sold out

ENGELMANN X BLUE SPRUCE HYBRID
or INTERGRADE
New Mexico:
Natural hybrid with unusual high years of needle retention, excellent growth rate and maintains excellent natural pyramidal shape to maturity. Needles are an attractive blue and not sharp. Appears very resistant to dessication after cutting. (103,000)

Price
$ 175.00
sold out

Price / oz
$ 20/oz
sold out
MEYERS SPRUCE (Picea meyeri)
China: Blue green foliage with excellent needle retention. Price / lb $ 95.00

NORWAY SPRUCE (P. abies)
Lake States: (55,842) 2012 & 2014 crop year, 94% & 96% germination $ 65.00
Lake States: (51,756) 2008 crop year, 57% germination $ 20.00
Pennsylvania - Landscape Specimens: $ 70.00

ORIENTAL SPRUCE (P. orientalis):
Dark Green, short needles and dense foliage. High value landscape plant. $ 80.00

WHITE SPRUCE (P. glauca)
Native Eastern U.S. (Blue) spruce. Well adapted for Eastern U.S. landscape. • Not recommended for Christmas trees. Lake States: $ 100.00
Landscape specimens, fast growth, blue and excellent natural shape and density. (140,000)

OTHER SPECIES

ARBORVITAE (Thuja occidentalis pyramidalis):
Pyramidal form for landscape and hedgerow planting. (350,000 ave.) Price / lb $ 75.00 sold out

ARIZONA CYPRESS (Cupressus arizonica):
Macedonia seed orchard selection. $ 55.00

E. HEMLOCK (Tsuga canadensis):
Pennsylvania: for landscape windbreak and hedgerow planting. (118,000) $ 150.00
HARDWOODS

Black Walnut (Juglans nigra):
Most valuable of all hardwoods suited to fertile well drained sites. Seed from highly selected trees with clear straight boles. (30)

Dogwood (Cornus florida):
Seed from selected tree seed orchard. Northern white variety. (4,500)

White Ash (Fraxinus americana):
Central Pennsylvania (13,000) sold out

Witch Hazel (Hamamelis virginiana):
A deciduous shrub or small tree that attains heights of 15’ - 20’ with small yellow flowers that bloom in September or October.

OAKS (Quercus spp.)
The following oaks are selected varieties that we have collected over the years in the central Pennsylvania area. Most trees are specimens used in landscapes, parks and university grounds.

If you are interested in any of these selections it helps to order early in September so we can put a priority on collecting them for you.

English Oak (Q. robur):

Northern Red Oak (Q. rubra):
Fast growing single tree selection. Adapted to heavy soils. Use for large shade tree or timber production. (75)

Pin Oak (Q. palustris):
Single landscape specimen with straight stems. (225)

Scarlet Oak (Q. coccinea):
Very select for color in late Fall. These are choice single trees, excellent form, landscape specimens. (105)

White Oak (Q. alba):
Provides preferred wildlife food. (120)

Price / lb

Black Walnut (Juglans nigra): $3.00

Dogwood (Cornus florida): $25.00 (dried berries)

White Ash (Fraxinus americana): $13.00

Witch Hazel (Hamamelis virginiana): $50.00

English Oak (Q. robur): $6.00

Northern Red Oak (Q. rubra): $3.50

Pin Oak (Q. palustris): $4.50

Scarlet Oak (Q. coccinea): $6.50

White Oak (Q. alba): $4.50
In order to better serve you, we’ve invested in a website where you’ll be able to view this catalog online or download and print it out for use later when you misplace this copy.

Our Order Forms are also available for download, simply click, print and fax them back to us like you have in the past and we’ll be happy to fulfill your order. Finally, if you have questions you’ll be able to find many answers online.

As always we still welcome your phone calls and will strive to meet your needs by understanding your tree growth performance objectives.
Our goals will always be to:

1) Meet your needs by understanding your tree growth performance objectives.

2) Better understand the physical environment of your nursery and your customers planting sites.

3) Understand how carefully identified geographic sources and improved seed perform on these sites, and make more profit for you and your customer.