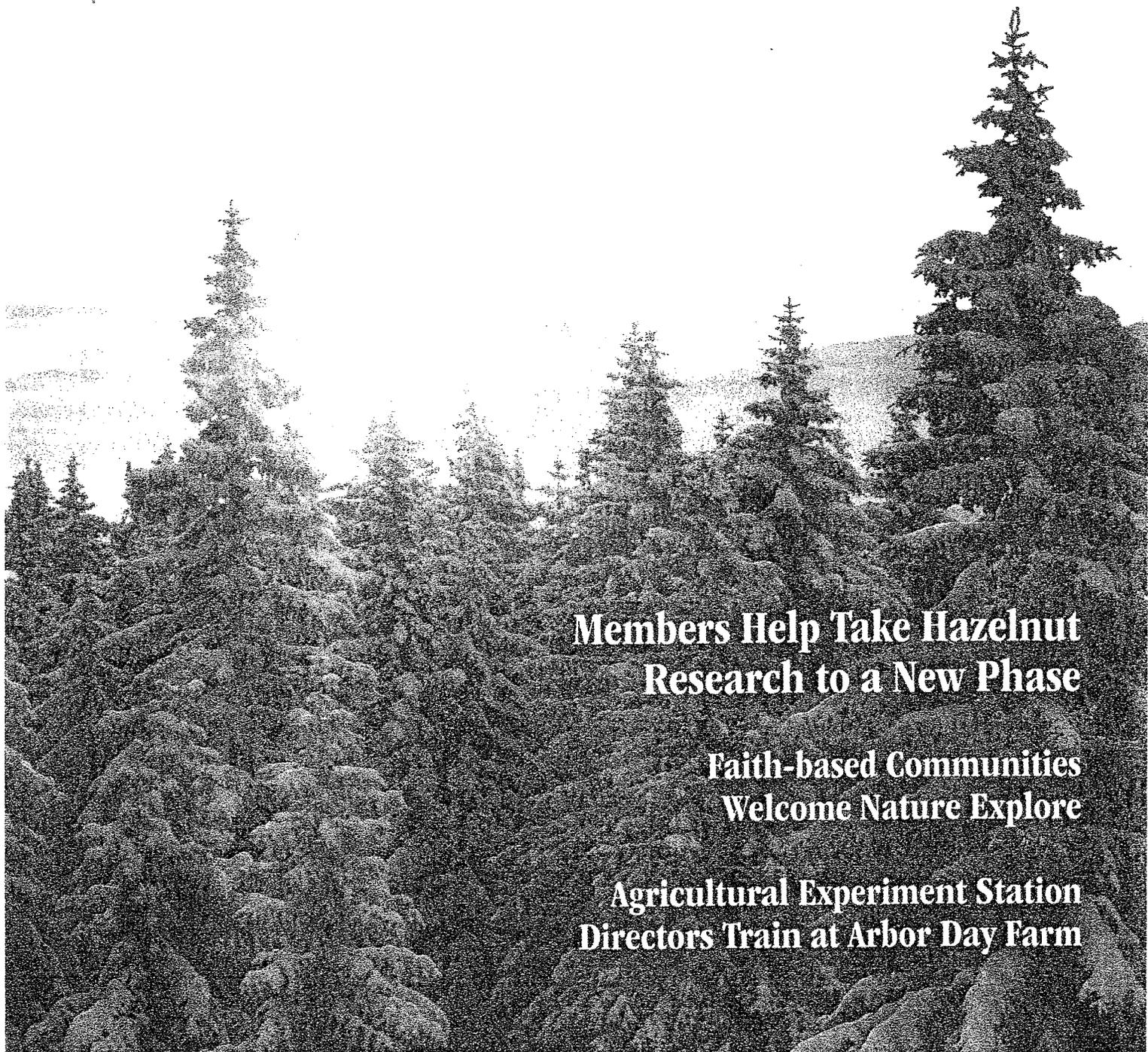


# Arbor Day®

January/February 2013



**Members Help Take Hazelnut  
Research to a New Phase**

**Faith-based Communities  
Welcome Nature Explore**

**Agricultural Experiment Station  
Directors Train at Arbor Day Farm**



Arbor Day Foundation  
Chief Executive,  
John Rosenow

## Arbor Day Journal



A Collaborative Project of  
Arbor Day Foundation and  
Dimensions Educational Research Foundation

## Faith-based Communities Welcome Nature Explore

The drought last year was extraordinary. At summer's end the drought monitor maps had huge swaths across the center of the country darkly colored as "extreme" and "exceptional," exceptional being the driest of the five stages of drought intensity. From the eastern Corn Belt through the Great Plains to the mountain west, forests were stressed and crops withered.

Among the consequences of the intensely dry conditions were countless forest fires large and small.

Near Arbor Day Farm, the corn shriveled in the fields. Some individual farms caught a break with a timely summer rain, and they harvested at least a partial corn crop. Some farms were so devastated that they didn't even bother to run a combine through the field.

Meanwhile the un-irrigated hazelnut field at Arbor Day Farm remained dark green through the summer, a small oasis amidst the area's brown fields. We harvested a full crop of hazelnuts, not a bumper crop, but plenty to meet our needs for seed for our Hazelnut Project participants.

Hazelnuts are a crop for our time—and for the future. It has been said that as the world faces the prospect of continuing climate change, we need to avoid the unmanageable and manage the unavoidable.

Hazelnuts can help on both fronts. A standing field of hazelnuts absorbs and stores far more carbon dioxide from the atmosphere than soybeans or corn, helping to reduce a primary cause of climate change. At the same time, they can better manage their way through expected weather extremes to come. Our hazelnuts are resilient hybrids from many plant sources, most of which are native to the Great Plains where they developed the deep root systems which allowed the bush to compete in the tall-grass prairie. These root systems serve hazelnuts well, drawing water from deep underground, reducing the plants' dependence on regular rainfall during the growing season. Hazelnuts won't grow in the middle of a desert, but they can tolerate extreme weather, including long dry spells, even flooding.

At Arbor Day Farm, we might have the best-fed squirrels and raccoons in the region—and always plenty more nuts that we plant and nurture so that new hybrid bushes can be sent to members across America. We thank you for your support of The Hazelnut Project. You are playing a major role in creating this important food source for the future.

*John Rosenow*

The Hebrew word, *shalom*, means hello, goodbye and peace. It also welcomes children and families into the Nature Explore Classroom at the Mid-Island Y Jewish Community Center in Plainview, New York. A flowering tulip tree — "the giving tree" — is a focal point that inspires children to create artwork or quietly contemplate. Like many other Nature Explore Classrooms across the country, it is built on a lasting connection to their community of faith.

Faith communities have long supported the preservation of natural spaces. In 1977, St. Andrew's Presbyterian Church in Houston, Texas, designated an area of their grounds as a "green area for recreation, especially for children." Today, the space remains in its natural state as woods and a Nature Explore Classroom. In Hixson, Tennessee, the Highland Plaza Community Preschool and its Nature Explore Classroom have become a legacy. After merging with another Methodist church, members made it possible for the vibrant school to continue to serve children and families in the neighborhood.

The opportunities for faith-based communities are wide-ranging. Nature Explore Classrooms can serve as a gift to the community, provide space for worship, or meet the new and unique needs of their congregation. Involvement is varied but it often begins with

a committed member of the congregation who has a vision to create a nurturing nature-based space.

Heather Hesse is just such a person. An active church member and mother of three, Heather set out to create a Nature Explore Classroom at St. Matthew's Episcopal Church in Lincoln, Nebraska. Inspired by the Nature Explore Classroom at her children's school, Heather described the benefits of an outdoor classroom and asked for the support of her parish. "Our church is a fixture in this neighborhood. We wanted the community and the adults in our parish to get as much out of it as the children," she said. Working with a Nature Explore design team, St. Matthew's created an outdoor oasis for worship, contemplation and learning. Now children from the neighborhood play in this space daily. The church uses it for outdoor services, special celebrations, Sunday school, and on a quiet afternoon you might see an elderly couple sitting on a bench under a redbud tree taking in the beauty.

You can be the person in your faith community who helps bring a Nature Explore Classroom to children and families. To find out more please call 1-888-908-8733 or visit [natureexplore.org](http://natureexplore.org).

Children at the St. Andrews Presbyterian Church in Houston, Texas, are introduced to their state's native plants in a Nature Explore Classroom.



News from... **LIED LODGE**  
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Nebraska City, Nebraska

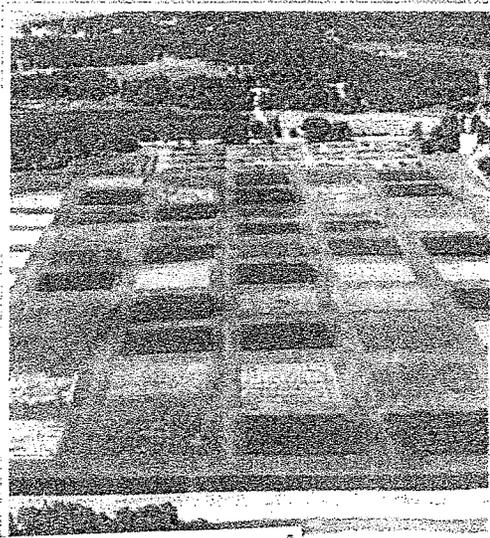
## Experiment Station Directors Train at Conference Center

Lied Lodge & Conference Center at Arbor Day Farm became a classroom last summer for administrators and researchers from the region's agricultural experiment stations. The group met for their annual meeting and focused on improving skills in grant request writing, team building, and interpersonal relations.

The North Central Regional Association of Agricultural Experiment Station Directors with headquarters at the University of Wisconsin in Madison is one of five regional associations charged with fostering cooperation in research. There are 12 experiment stations in the region working to improve agriculture and the environment. "Our stations work on everything from finding more sustainable methods for growing crops to improving forest management," said Christina Hamilton, the association's assistant director. One current example is research to find efficient ways to grow non-food crops and to utilize wasted portions of food plant materials, both in an effort to increase biofuel production. The goal is to develop alternative fuel sources that can be economically grown on America's farms and that will not have the unintended consequences of raising food prices at the grocery store.

The regional association traces its roots to 1887 when the Association of American Agricultural Colleges and Experiment Stations was formed to plan and organize research and make results accessible to those who can use them. Cooperation between units in the United States and colleagues in Canada is another hallmark of this organization. Currently, the association manages more than 100 multistate projects that include both research and education.

Christina Hamilton said of her group's experience at Arbor Day Farm, "It was wonderful in every way. When I walked into the lobby of the Conference Center it was like a sanctuary." She also personally enjoyed the parking lot that doubles as an arboretum. Her association plans to return for its 2013 meeting this spring and she said, "This time I am going to spend more time outside and looking at Arbor Day Farm's conservation demonstration areas."



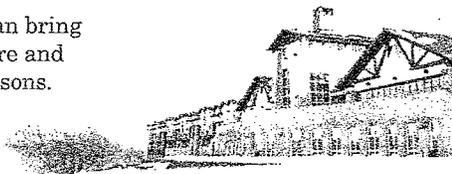
Above: Experimental testing of biofuel crops at Michigan State University.

Left: Scientists at the University of Minnesota look for ways to prevent diseases.

## Experience the serenity of winter



A hike in the winter woods at Arbor Day Farm does more than bring color to your cheeks. It gives you a chance to see the structure and beauty of trees with a different perspective than in other seasons. It is also easier to spot birds and other wildlife and ponder their wanderings by studying tracks in the snow. A winter visit to Arbor Day Farm is an experience to be cherished by all ages.



Arbor Day Farm • Nebraska City, Nebraska • [arbordayfarm.org](http://arbordayfarm.org)

# HAZELNUT PROJECT PROPELS TO

Members play key role in developing superior hybrid with world-wide potential.

**I**t all began in 1996 when 60 promising hazelnut hybrids were planted at Arbor Day Farm. Soon Arbor Day Foundation members all over the United States were pitching in to plant seedlings from the hybrids and respond to annual questionnaires about how well their plants were doing in their locality. The goal was – and is – to help scientists from cooperating universities develop disease-resistant hazels with superior nuts and that can be economically grown over a wide range of the United States. The environmental and economic impact of such a contribution to woody agriculture will be huge.

Now, after thousands of responses from members, those who have reported the largest hazelnuts and superior bushes are being asked to send samples. These will be grown in the greenhouse at Arbor Day Farm and crossbred with bushes on the 9-acre research field beside Lied Lodge & Conference Center. Records being kept of the bushes will reveal if the results produce even better hazelnut prodigy. In coming years, this cycle will be repeated. In a sense, we are helping nature speed up what might take natural selection millenniums to achieve. It is essentially the same process

that people have used to develop superior apples, pears and other fruits from their wild forbearers.

The road to this point in the research has not been without bumps. Curtis Goss of Bolivar, Missouri, reported that squirrels have discovered his bushes and taken a toll. “Three years ago I got 25 pounds of nuts on 3 bushes,” he reported. “This year I have 5 bushes but I’ll be lucky to get nuts.” Nonetheless, Curtis reports that his hazels are usually the size of a nickel or more, so he is sending 11 of his survivors for the next stage of the research.

Lloyd Haims has been faithfully tracking his hazelnut production since 2005. Unfortunately, his region of Illinois saw its corn crops devastated by drought last summer. Like other woody crops, hazelnuts fared better but were still affected. The nuts were a bit smaller and fewer than usual with his best bushes going from 1,000 or more nuts down to about 200. Despite the setback, Lloyd is as enthusiastic as ever about the hazelnut research. His contribution to the effort this year will be 30 of his largest nuts.

In Lloyd’s case, he has gone beyond submitting questionnaires and supplying samples of his best hazels.

## 1 PLANTING

Hazelnut Project donors receive and plant free Arbor Day hybrid hazelnut bushes in their yards, acreages, or farms.

## 2 QUESTIONNAIRE

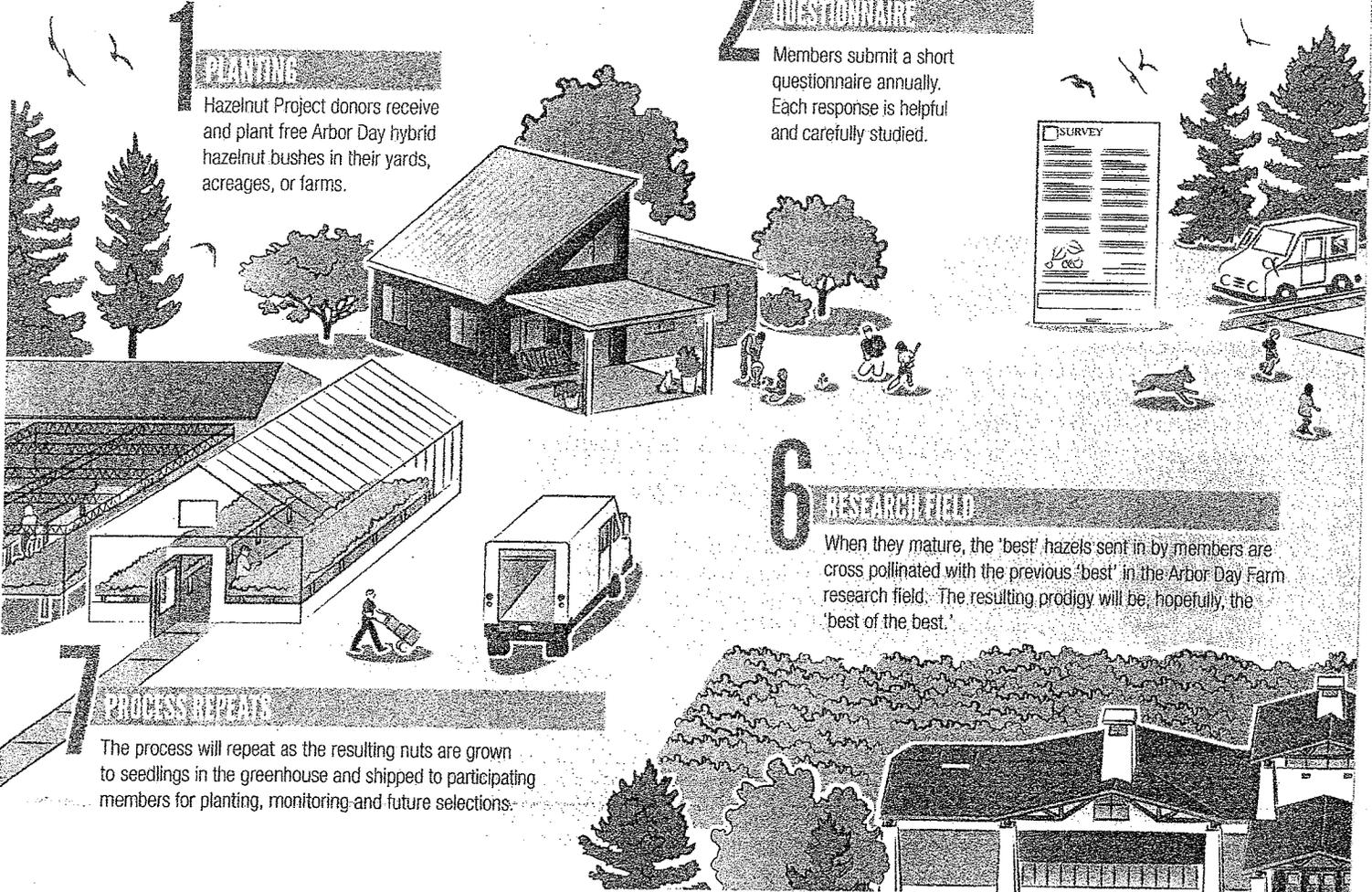
Members submit a short questionnaire annually. Each response is helpful and carefully studied.

## 6 RESEARCH FIELD

When they mature, the ‘best’ hazels sent in by members are cross pollinated with the previous ‘best’ in the Arbor Day Farm research field. The resulting prodigy will be, hopefully, the ‘best of the best.’

## 7 PROCESS REPEATS

The process will repeat as the resulting nuts are grown to seedlings in the greenhouse and shipped to participating members for planting, monitoring and future selections.



# NEXT STAGE

## Arbor Day Hazelnuts

BY JAMES R. FAZIO

He is working to involve his alma mater, Southern Illinois University, in hazelnut research. "I would like a research plot set up on campus and a program in which private landowners could donate use of their land for other plots for research and teaching," said Lloyd. And he walks the talk. He has already purchased 100 hazelnuts to plant on land owned by a retired professor and planted them with the help of students.

Thanks to Arbor Day Foundation members who plant hazelnuts and return questionnaires, locate wild hazels for diversifying the genetic pool, or send samples of their best produce, the research moves forward. As a result of this good work, the project is transforming into a meaningful solution for issues facing our world. For more information about this important project, please visit [arborday.org/hazelnuts](http://arborday.org/hazelnuts).



Lloyd Hairs of Alto Pass, Illinois, with one of his prized hazelnut bushes and its produce.

### 3

#### HOPES

Members that report nickel-size hazelnuts and/or other outstanding features may be contacted with a request to send samples of their best nuts. Those who volunteer receive a shipping box and instructions.

### 4

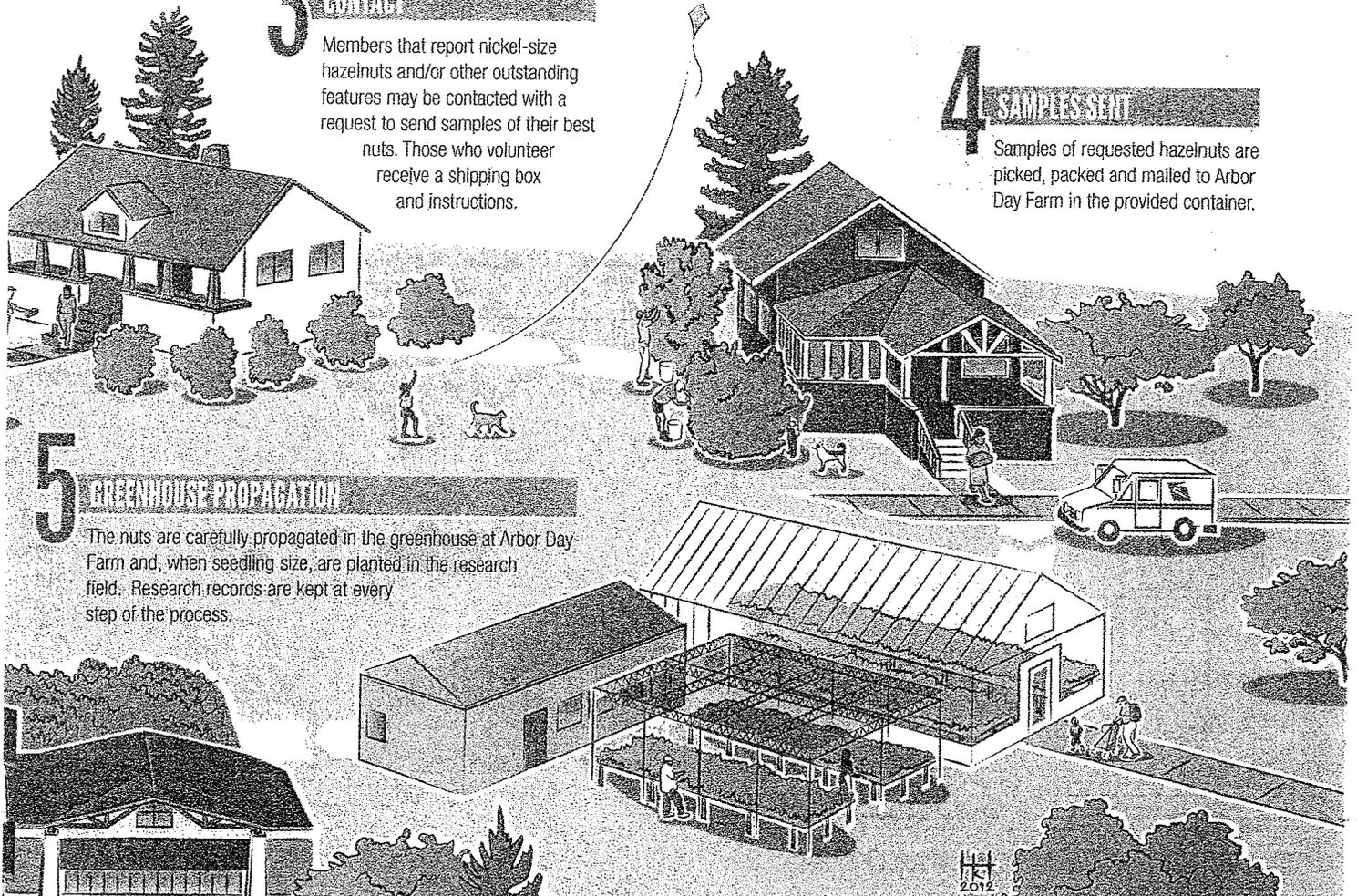
#### SAMPLES SENT

Samples of requested hazelnuts are picked, packed and mailed to Arbor Day Farm in the provided container.

### 5

#### GREENHOUSE PROPAGATION

The nuts are carefully propagated in the greenhouse at Arbor Day Farm and, when seedling size, are planted in the research field. Research records are kept at every step of the process.



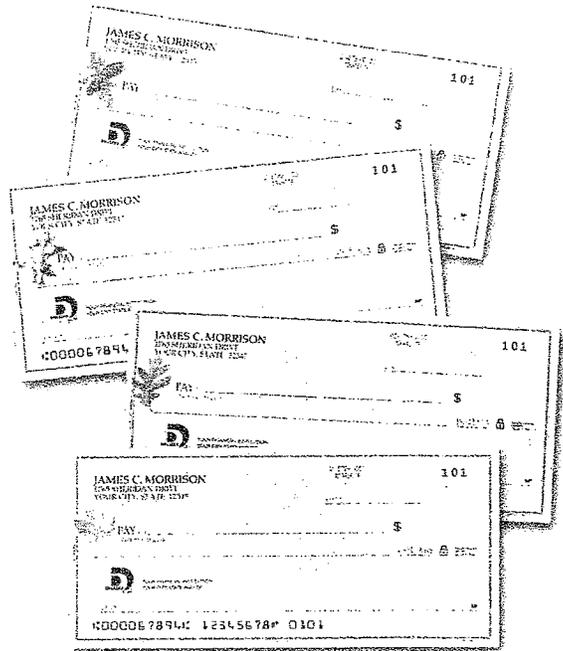
# Deluxe Checks Help Support Arbor Day Programs

For more than 16 years, a partnership with Deluxe Checks has provided funds to support the Arbor Day Foundation's mission to plant, nurture, and celebrate trees. Since 1996, the Minneapolis-based company has donated \$1 each time a customer orders Arbor Day Foundation licensed checks and \$.50 for each order of checkbook covers. This partnership has resulted in more than \$2.5 million of support for the stewardship programs of the Foundation. The tree-themed design on the Deluxe Check products provides additional support through publicity as members use their checks.

Deluxe Checks is the world's largest manufacturer of consumer checks and offers additional services in support of small business enterprises in the United States, Canada and Ireland. Through the years, the company has built a reputation that combines innovation with integrity. The Arbor Day Foundation salutes this dynamic organization for its ongoing support to help make this a better world through trees and the stewardship of our natural resources.

For more information and to see a list of our other corporate partners, please visit [arborday.org/partners](http://arborday.org/partners).

From planting trees in communities and National Forests to connecting children with nature, Arbor Day Foundation programs are advancing thanks to support from companies such as Deluxe Checks.



## A World Blessed with Trees can be Your Legacy When You Include the Arbor Day Foundation in Your Will

You're no doubt aware that your bequest to the Arbor Day Foundation would leave a lasting legacy for our nation's children and grandchildren—greener, more beautiful communities for generations to come.

But we want to remind you that your bequest can also help the Arbor Day Foundation replant America's fire-ravaged forests, restoring habitat for countless creatures—from colorful songbirds to fox pups and lynx kittens.

Anyone can include the Arbor Day Foundation in their will, no matter what the size of their estate.

To make a bequest, include this sentence in your will:  
*I give \_\_\_\_\_ (specific amount or property, percentage or residue) to the Arbor Day Foundation, located in Nebraska City, NE, a tax-exempt organization, for the purpose of supporting its environmental-stewardship and education programs. (Tax ID 23-7169265)*

To receive additional information or assistance regarding making a bequest, or creating or updating your will, please complete and mail the coupon, or contact our Gift Planning Coordinator Chloe Sweet, by calling 888-448-7337, ext. 202 or email [csweet@arborday.org](mailto:csweet@arborday.org).

### Information Please

- Please send me information about how to include the Arbor Day Foundation in my will.
- I have already named the Arbor Day Foundation in my will. (All wishes for anonymity will be honored.)

Please print:

Name \_\_\_\_\_

Address \_\_\_\_\_

City/State/Zip \_\_\_\_\_

Phone Number \_\_\_\_\_

Best time to call \_\_\_\_\_



Mail to: Arbor Day Foundation, 211 N. 12th St., Lincoln, NE 68508



# TREE BASICS: Planting & Care



**Q:** With the terrible drought we are having, is there anything special we should do this winter for our trees?

As we go to press it looks like some parts of the country may experience dry conditions continuing into the winter months. If this happens, and if the soil is not frozen, then – yes – by all means your young trees, especially, will need a little extra help. It may seem somewhat strange, but give them some water in mid-winter if the soil is dry. Hopefully you also watered them in the fall and will continue to do this until rainfall is adequate.

For our members in parts of the country having a normal winter, this is a good time to remind you to take a broom and knock snow or ice off arborvitae and other conifers. The best time to do this is immediately after the storm. This small effort will help the trees retain their shape without you needing to do the extra work next spring of tying them back up with cord or light rope. And don't overlook hardwoods that are within reach. A buildup of snow or ice can break bare limbs.



A resident in snow country relieves the pressure on lower limbs of his front yard conifers.

Photo courtesy of The Gazette, Jamesville, WI.

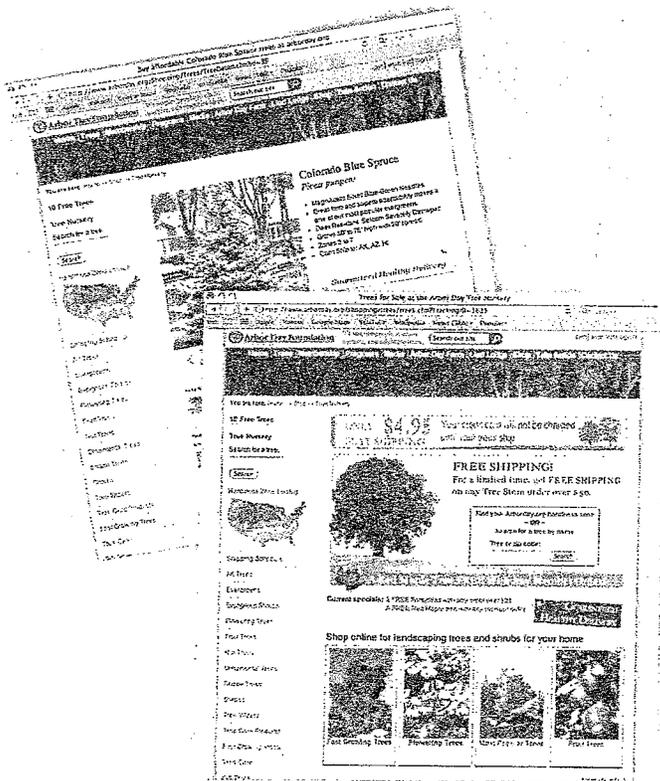
## arborday.org

## See what's new in the Tree Nursery

Now is a good time to visit the Tree Nursery at [arborday.org/treenursery](http://arborday.org/treenursery). Spring is just around the corner and if you have not been to the Tree Nursery for awhile, you are in for a special treat. We have been hard at work making this site the premier online destination for finding trees and shrubs and we are adding new varieties regularly. Each is illustrated and described in detail. For example, you can see a photo of the huge, bright red blossoms of Red Rocket Crapemyrtle and learn that it is fast-growing, bears flowers from mid-summer to autumn, and that it is a water-wise plant with resistance to both drought and heat. Or there is the mouth-watering photo of Rubel Blueberry and details about soil requirements, the abundance of its yield, size at maturity, where it will grow, and any shipping restrictions. Currently, nearly a dozen new plants have been added to diversify the already wide selection available to you without leaving your house.

If you are not sure of the species you would like to plant, use the tabs that will show you all the trees and shrubs in categories such as flowering trees, evergreens, nut trees, fast-growing trees and others. And when you select a category, the most popular plants will be displayed at the top of a page with all the others below. Still not certain? Click on 'Tree Wizard' and you will be guided through a series of questions that will result in suggestions that meet your particular needs.

Finally, click on 'Tree Care' and see tips on planting, pruning, mulching, watering and other techniques to keep your trees and shrubs healthy and vibrant.



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# Live Oak

*Quercus virginiana*



**LEAVES:** Alternate, 1 ½ to 5 inches long and up to an inch wide. Leathery with wooly pubescence beneath and smooth margins that sometimes have small spines. A prominent, yellowish-brown midrib extends from a very short petiole.

**FLOWERS:** Females are usually less than ¼-inch, tipped with bright red, and found growing singly or in groups of up to 5 from the base of leaf stems. Males are on the same tree, borne on hairy, yellow-green catkins about 2 to 3 inches long.

**ACORNS:** One to five grow on a stalk from ½ to 3 inches in length. At maturity they are dark brown to black, up to an inch long with about 1/3 of the acorn enclosed in a pointy cap.

**FORM:** At maturity, a massive tree 40 to 80 feet in height with a single trunk that may reach 3 to 4 feet in diameter. Some lower limbs spread almost horizontally while upper ones are arched. Crown shape tends to be rounded with a spread of 60 to 80 feet.

**BARK:** Blocky and very dark or even black on older trees.

#### **WILDLIFE VALUE:**

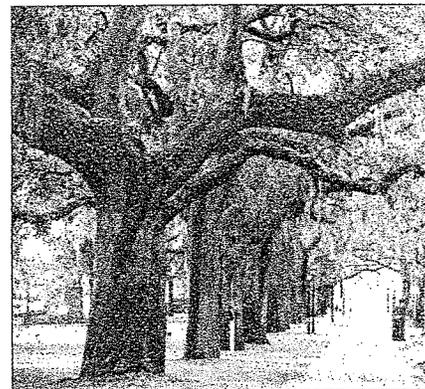
The acorns are appreciated by both resident and migrating songbirds as well as quails, wood ducks, turkeys, squirrels and deer.

**PLANTING:** Requires a spacious, sunny area. Adaptable to a variety of soil textures but grows best on sites that are moist but well-drained and within the acidic pH range of 4 to 7. Suitable for hardiness zones 7 to 10.

**LIVE OAK** is the iconic tree of the South, often harmlessly draped in Spanish moss. It has been called one of the most impressive trees in North America and can live to be hundreds of years old. Its exceptionally strong

To purchase or learn more about this tree and others, visit [arborday.org/liveoak](http://arborday.org/liveoak).

To find tree species to plant in moderate or cooler climates or to find your hardiness zone visit [arborday.org/zones](http://arborday.org/zones).



wood was a key lumber in early navy vessels, including the famous USS Constitution, or 'Old Ironsides.' Today it is a tree appreciated by arborists and city foresters for its wind firmness, adaptability to various soil types, and tolerance to soil compaction and salt spray. Since this is a southern zone tree and grows poorly at the northern edge of its range, readers in the north interested in purchasing an oak might consider bur, red, white or others found in the Tree Nursery at [arborday.org](http://arborday.org).

An official publication of



**Arbor Day Foundation®**

[arborday.org](http://arborday.org)

We guarantee delivery of healthy trees to our members. Please check ordering deadlines and shipping dates at [arborday.org/shipping](http://arborday.org/shipping). If you need to contact us about your trees, call 888-448-7337, email us at [info@arborday.org](mailto:info@arborday.org) or drop us a note at Member Services, Arbor Day Foundation, 211 N. 12th St., Lincoln NE 68508. We want your tree-planting efforts to be successful!

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