

Private Pesticide Applicator Certification

Federal and state law states a private pesticide applicator must be certified and licensed to buy, use or supervise the use of, restricted-use pesticides to produce an agricultural commodity on property they own or rent or on an employer's property if the applicator is an employee of a farmer. No pesticide license is needed if one will only be using general use pesticides on their farm.

Applicators whose certification is due to expire on April 15, 2006 will receive a letter from the Nebraska Department of Agriculture (NDA). Bring the letter to the training session. The NDA letter contains a bar-code form and will make the application process much simpler and faster than filling in the "bubble" form.

Three Private Pesticide Applicator training sessions have been scheduled at the Lancaster Extension Education Center, 444 Cherrycreek Road, Lincoln:

- Saturday, Jan. 14 • 8:30–11:30 a.m.
- Thursday, Feb. 9 • 6:30–9:30 p.m.
- Friday, Feb. 10 • 8:30–11:30 a.m.

There is a \$15 extension training fee collected at the training session. When the NDA receives the application from the extension office, private applicators will be billed \$25 for a license fee. The license is good for three years, expiring on April 15, 2009 for those who certify this spring.

An alternative to attending the training session is to pick up a self study book at the extension office, read the chapters, complete the test questions and bring the book back to the office where the test will be graded. The application form will be forwarded to the NDA after the test has been scored. A \$30 materials fee will be collected when the book is picked up.

Commercial Pesticide Applicator Training

Commercial applicators are persons who apply restricted-use pesticides for any purpose on any property other than property owned or rented by the applicator or their employer or for hire or compensation. Commercial applicators shall also include any person who applies lawn care or structural pest control pesticides whether restricted-use or general-use to property of another person. Public employees (employed by a town, county, state) applying mosquito control pesticides whether restricted-use or general-use, must also hold a commercial or non-commercial certification.

You must pass a written examination in the general standards category and one or more additional categories to become licensed initially as a commercial applicator. A commercial license is good for three years. Once licensed in a category, you can maintain commercial certification by attending a recertification training session or by passing a written examination, with a few exceptions explained below.

Initial commercial certification training and testing sessions for commercial applicators will be held on Feb. 7, March 7 and April 20 at the Lancaster Extension Education Center, 444 Cherrycreek Road, Lincoln. General standards starts at 9 a.m. and other categories begin at 1 p.m. or 3 p.m. It is highly recommended you obtain and review written study materials prior to attending the training session for initial certification to improve your chances of passing the written examination.

Commercial recertification sessions will be held Feb. 9 and Feb. 28 with general standards starting at 9 a.m. and other categories beginning at 1 p.m. or 3 p.m.

Note: Due to time and space limitations, only specific categories will be presented on training days. Call the pesticide education office at 472-1632 or UNL Extension in Lancaster County at 441-7180 to learn which specific categories will be offered on a given day.

Call the UNL Pesticide Education office at 472-1632 to register for a training session. The training fee for either initial or recertification sessions is \$30. Commercial applicators who wish to pick up additional certification in a specific category should register as well. The training fee for adding one or more categories to an existing certification is \$15. Commercial applicators meeting the requirements for certification or recertification will receive a bill from the Nebraska Department of Agriculture for \$90 for the license fee (good for three years).

Study materials for all commercial categories may be purchased from the pesticide education office, UNL East Campus, 101 Natural Resources Hall, Lincoln or accessed online at <http://pested.unl.edu/pat/>.

In addition to the training sessions mentioned above, applicators already certified in General Standards and Agricultural Plant categories (and Regulatory and the Demonstration/Research subcategories) can recertify by attending the Crop Protection Clinic on Jan. 23.

Chemigation Certification Training

In order to apply pesticides or fertilizer in irrigation water, a permit must be obtained for the site and the person who oversees the application must be certified as a chemigator. To obtain a chemigation permit for a site, application must be made with the local Natural Resources District, a fee paid and the site must pass inspection by NRD personnel. State law requires the operator to receive training and pass a written test to be certified as a chemigator. Certification is good for four years. A chemigation training and testing session will be held Tuesday, Feb. 7, 6:30 p.m. at the Lancaster Extension Education Center.

Is Burning Wood an Economically Feasible Option?

By Tom Dorn
UNL Extension Educator

Heating the home with a wood stove is one case where money does grow on trees but the question is: Will wood heat be the least expensive option when all the associated costs are counted?

Equipment Costs

The first factor when considering wood as an alternative source of heat is the cost of the equipment needed. Most people choosing to heat with wood will have both a wood stove and a conventional heater for times when nobody is around to stoke the stove. This adds to the investment compared to homes not using wood for heat. Besides the cost of the stove and related installed equipment, if you harvest your own wood, you need one or more chain saws, a way to haul the wood and a way to split the larger logs.

Air tight wood stoves or furnaces capture about half of the heat energy (BTU's) released by burning the wood (50 percent efficiency). The addition of catalytic converters will extract extra heat and reduce pollution by reacting with unburned flue gases. A major improvement in some installations is the ability to bring in outside air instead of using heated household air for combustion. Stoves that are not airtight can draw excess air out of the house and up the chimney, reducing the overall efficiency. Open fireplaces (those without doors), while romantic, can actually have negative efficiencies because of the large amount of household air drawn into the fireplace and up the chimney. Don't forget to close flue dampers when a stove or fireplace is not in use. Warm household air can be drawn up the flue by the "chimney effect," especially when the wind is blowing.

Harvesting Costs

Wood heating can reduce home heating costs when "free" firewood is located close to home. An important trade-off with "free" firewood is the time and labor required to keep wood supplied to the stove. Some folks don't count the labor. They enjoy the opportunity to be outdoors and consider the exercise a benefit. It has been said, "A wood fire warms you three times; when you cut the wood, when you split the wood and when you burn the wood."

The cost of operation, maintenance and repairs should not be overlooked. Chain saws tend to be high maintenance machines. The stove itself, the chimney and the associated equipment all have expected service lives and will eventually need replacement.

What is a Cord of Wood?

Since firewood is sold by the cord, it is important to know how much wood is in a cord. One standard cord of wood measures 4 feet x 4 feet x 8 feet (total volume 128 cubic feet). One cord of wood contains an average of 80 cubic feet of solid wood. The



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remainder is air space between the chunks of wood in the stack. Wood is also sold by the pickup load. Depending on the capacity of the box, a pickup load of wood usually equals one-third to one-half cord of wood.

When air dried to 20 percent moisture content, all species of wood have an energy content of about 7,700 BTU's per pound. Since the density of wood varies by species, a lightweight wood such as cottonwood, has a lower BTU content per cord than a heavy weight wood such as oak or ash. See Table 1 (page 11).

If wood is purchased instead of harvested by the homeowner, the economic feasibility is easier to calculate. Table 1 shows the weight of a standard cord at 20 percent moisture for various species of trees and the number of standard units of various fuels needed to supply the same amount of heat (BTU's) to the home as a cord of each of the wood species when the efficiency of the conventional heater and the efficiency of the wood stove are taken into account.

How to Estimate a Breakeven Cost for Firewood

Example 1 — Propane vs. Ash. If one ignores the ownership costs by assuming both an LP furnace and a wood stove are already installed in the home and if LP gas is selling for \$1.10 per gallon, what is the maximum you could pay for (or could spend gathering) a cord of Ash firewood?

From the table (page 11), a cord of 20 percent moisture Ash firewood (3,440 pounds) burned in a wood stove that is 50 percent efficient, delivers as much useful heat as 170 gallons of LP gas burned in a furnace that is 85 percent efficient. If fuel cost is the only factor, the maximum one could pay for Ash firewood delivered ready to use is $\$1.10 \times 170 = \187 a cord. If a pickup load contains one-third of a cord (1,147 pounds), this is equivalent to \$62 per pickup load.

Example 2 — Heat Pump vs. Oak. Likewise, if electricity is \$0.08 per kWh, what is the maximum you could pay for (or could spend gathering) a cord of Oak

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Crop Protection Clinic, Jan. 23

A Crop Protection Clinic will be held Monday, Jan. 23 at the Lancaster Extension Education Center, 444 Cherrycreek Road, Lincoln. Registration begins at 8 a.m. with sessions continuing from 9 a.m. to 4 p.m. The \$30 registration fee includes proceedings, publications, refreshments and the noon meal.

This very popular clinic offers many topics of interest to crop producers and agribusiness professionals alike. As usual, the latest developments in weed, insect and disease management topics will be covered. A partial list of specific topics this year includes: Soybean Insects Update, Foliar Fungicides 101, Weeds on the Increase, Soybean Diseases Update, Doing a Professional Job of Pesticide Application, What's New with Pest Management and Bt Corn Hybrids: Selection and Resistance Management.

The clinic will wrap up with a session for commercial applicator certification where commercial pesticide applicators will be able to recertify in General Standards, Ag Plant, Regulatory and Demonstration & Research by attending the entire workshop session.