

University of Nebraska - Lincoln

DigitalCommons@University of Nebraska - Lincoln

Historical Materials from University of
Nebraska-Lincoln Extension

Extension

1977

G77-338 Open Burning (Revised March 1984)

Donald E. Westover

University of Nebraska - Lincoln, dwestover1@unl.edu

Follow this and additional works at: <https://digitalcommons.unl.edu/extensionhist>



Part of the [Agriculture Commons](#), and the [Curriculum and Instruction Commons](#)

Westover, Donald E., "G77-338 Open Burning (Revised March 1984)" (1977). *Historical Materials from University of Nebraska-Lincoln Extension*. 1324.

<https://digitalcommons.unl.edu/extensionhist/1324>

This Article is brought to you for free and open access by the Extension at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Historical Materials from University of Nebraska-Lincoln Extension by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.



Open Burning

Donald E. Westover, Fire Program Coordinator

- [The Situation Today--The Law](#)
- [Safe Burning Procedures](#)
- [Trash Burning](#)
- [Burning Large, Open Piles](#)
- [Agricultural Field Burning](#)

People have been using fire in their cleanup chores for hundreds of years. One of the most common reasons for burning on the farm and in the city alike, has been to dispose of leaves and garden residues in the spring and fall of the year. Another common practice has been to burn tree limbs and stumps, fence posts, even old haystacks on the farm. Open burning has been done on a variety of scales, from jobs as small as burning the day's trash in the backyard burning barrel to jobs as large as burning wheat stubble after harvest.

The Situation Today--The Law

The pressures of today's increasing populations and more restrictive air pollution regulations have changed things somewhat. An increasing number of wildfires resulting from careless open burning has also prompted additional regulations of this activity. At present, there are three types of regulations that might limit the use of fire by people both on the farm and in the city.

1. Many of Nebraska's large municipalities and more populated counties have passed ordinances that prohibit or otherwise restrict open burning within their corporate limits. Persons unfamiliar with their local ordinances should check to see if burning is legal in their locality.
2. Rule 11 of the Nebraska Air Pollution Control Rules and Regulations states, "no person shall cause or allow any open fires." This rule has six exceptions; two of which (in essence) state: 1) agricultural burning can be done by the landowner on his own land; and 2) burning household refuse on residential premises by the people residing there is permissible provided there are 10 or fewer dwelling units on the premises, and also provided there are no local ordinances to the contrary. This rule also lists certain types of burning that can be done after obtaining a permit from the director of the Department of Environmental Control. People with further questions on obtaining a burning permit should refer to Rule 11 or contact the Air Pollution Division of the

Department of Environmental Control, P. O. Box 94877, State House Station, Lincoln, NE 68509, (402) 471-2186.

3. The State Fire Marshal's ban on open burning makes all open burning illegal. This ban may be waived by the local fire chief. Persons who wish to do some open burning must secure a burning permit from the fire chief who has jurisdiction in their area. Burning trash in an approved incinerator or burning barrel with a safety topscreen is not classified as open burning; therefore, no permit is required for this activity. Persons who have questions about the safety of their incinerators or burning barrels should contact their local fire chief for guidance.

Safe Burning Procedures

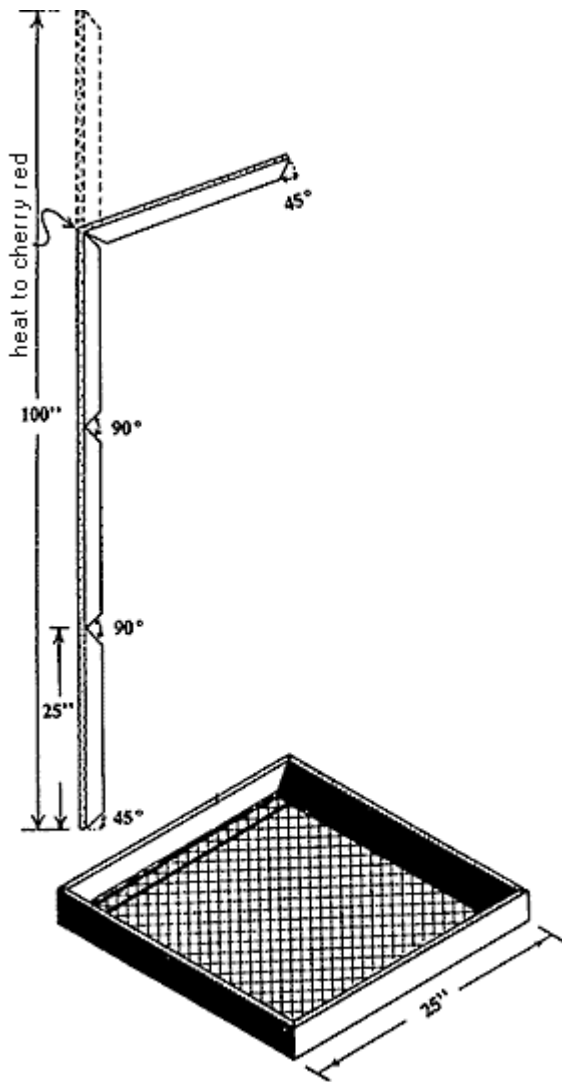
After determining that open burning is legal in your case, there are some safety considerations of which you should be aware.

We will consider three types of burning common in Nebraska and give specific recommendations for each type.

There are certain considerations common to all three types of burning. Wind is one of these. It is generally accepted that winds over 10 miles per hour make for hazardous burning conditions. Winds blowing this hard are capable of picking up and carrying pieces of burning material, which often fall to the ground and start fires outside of the controlled area. These can cause wildfires. Although it seems that the wind in Nebraska is always blowing, there are periods of calm winds nearly every day. Winds are generally favorable for burning in the evening and early morning hours.

Trash Burning

Always burn trash in a burning barrel. It is very important that the barrel be equipped with a metal grate or heavy screen on top to keep burning papers and materials inside. The best size range for the top screen mesh is 1/4 to 1/2 inch (1/2" No. 13 flattened expanded metal). The following illustration gives the instructions for making a durable, sound topscreen to fit a 55-gallon drum.



Materials Needed for constructing a sound topscreen:

1 piece of angle iron 1" x 1" x 1/8"

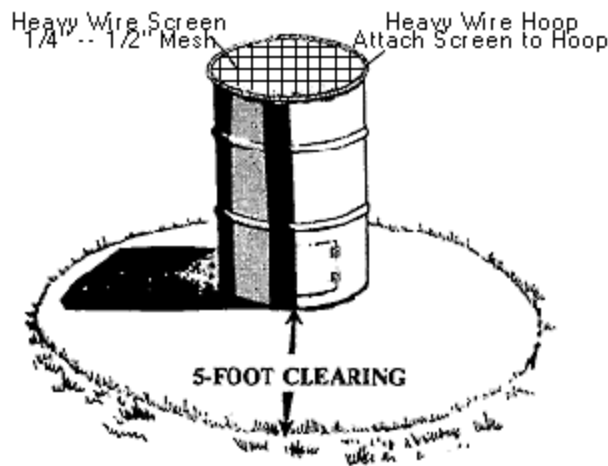
1 piece 1/2" No. 13 flattened expanded metal

Welding Torch

Instructions

1. Cut 3 notches (90° each) 25" apart.
2. Cut 45° angle on each end of angle iron.
3. Heat outside of angle iron at notch and bend to right angle. Repeat at each notch.
4. Apply heat to area where 45° angles join and weld together.
5. Lay frame upside down and place expanded metal inside. Weld to the bottom of the frame.

The barrel should be sturdy and free of holes in the side. Clear the area around the barrel down to bare soil five feet from the barrel. Locate the burning barrel well away from buildings and areas that might easily catch fire. Always have fire fighting tools (garden hose and shovels) handy and never leave the fire unattended.



Here's a burning barrel made from a 55-gallon drum. Note that the top screen must be either fastened in place or attached to something heavy in order to keep it in place.

Burning Large, Open Piles

When burning materials such as tree limbs and stumps, locate the pile away from buildings and other high hazard areas. Plow a fire line (minimum of 3 feet wide) around the pile of debris. The fire line must completely encircle the pile and expose bare soil. Have sufficient equipment (hoses, shovels, and tractors are good) nearby to fight the fire if it gets out of control. *It is especially important that this type of fire never be left unattended.*

Agricultural Field Burning

At best, this type of large scale burning is tricky and should be attempted only by people knowledgeable in fire behavior. In 1975, for instance, Nebraska wildfires burned 53,000 acres, and over 30,000 acres burned as a result of runaway debris-burning fires.

Field burning is not advisable or even beneficial in many instances--it should be thought of only as a last resort. Not only is it risky, but it also robs the soil of needed organic material.

There are a couple of alternatives to burning. Which one you should use depends upon soil moisture. In times of abundant soil moisture, crop residue (such as wheat stubble) can be plowed under rather than burned. In western Nebraska, or during drought periods, stubble mulching is the wisest alternative. Tests have shown that only part of the nutrients tied up in crop residues are returned to the soil by burning. The rest are lost into the air. When the stubble is turned under or left in place, these nutrients are not lost and the residue helps protect the soil from wind and water erosion. Also, in many of Nebraska's heavier soils this organic matter is valuable for building good soil structure.

A person faced with residue disposal in a field should consider: 1) the various regulations affecting him (especially the burning ban), and 2) the alternatives to burning. If burning is the best alternative, here are some guidelines to follow.

Before starting a fire, make certain that there is a fire line completely around the field. A 6-foot fire line should be sufficient in most cases. Have plenty of men and equipment on hand to fight the fire if it starts to get out of control. Some wind is necessary to carry the fire across the field, but remember that too

strong a wind will also carry it across your fire line. To speed up the operation on days of light wind, the fire can be lighted in strips perpendicular to the wind direction. Burn the first strips on the downwind side of the field and move upwind to start the other strips.

File G338 under: SAFETY

D-1, General

Revised March 1984; 12,000 printed.

Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture. Elbert C. Dickey, Director of Cooperative Extension, University of Nebraska, Institute of Agriculture and Natural Resources.

University of Nebraska Cooperative Extension educational programs abide with the non-discrimination policies of the University of Nebraska-Lincoln and the United States Department of Agriculture.