



Portable Electric Fencing for Preventing Wildlife Damage

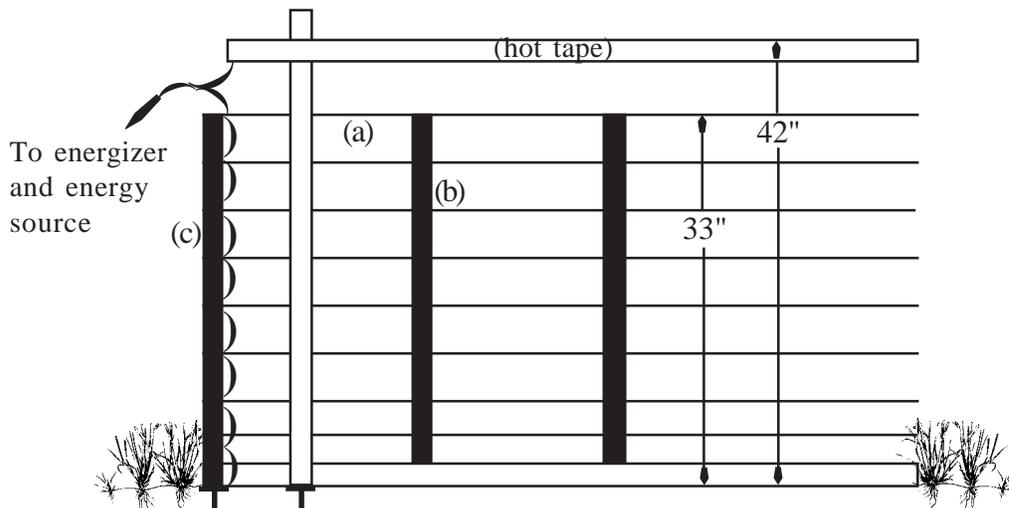
John Grande, Ph.D., Director, Snyder Research & Extension Farm; Larry S. Katz, Ph.D., Extension Specialist in Animal Science; and Geoffrey Slifer, Technician

Farmers have used electric fencing for many years to contain livestock and reduce wildlife damage to agricultural crops. In 1996 and 1997, Rutgers University, Snyder Research and Extension Farm field evaluated portable electric fencing systems to determine their effectiveness in reducing damage from deer and small mammals (rabbits, groundhogs, raccoons, etc.). Preliminary results indicate effective reduction in crops damaged by wildlife in small garden size areas (25' X 50'). Portable electric fencing systems are quick and easy to install, a typical 25' X 50' area can be set up in approximately one hour without tools.

The electric fence energizer is powered by a 12-volt automobile type battery or a 120-volt AC electrical outlet. The fence energizer produces low amperage, high voltage electrical pulse which acts as a deterrent to wildlife.

Portable electric fences have five major components: 1) the fence itself; 2) the energizer; 3) the power source; 4) the grounding mechanism; and 5) Hot Tape. The fence (see illustration) consists of conductive strands of stainless steel filaments and strands of nylon cord (a). These strands

are kept separated by plastic struts (b) approximately every 12 inches creating a "mesh type" barrier. Fiberglass posts (c) with 5-inch steel spikes, allowing them to be hand-pushed into the ground, support the entire fence. The energizer requires low voltage from the power source (battery, solar unit with a battery, or a 120 volt AC outlet) and transforms it into a high-voltage pulse that lasts approximately 3/10,000 of a second, each second. This pulse, although high voltage, is low amperage, reducing the electrical hazard to people and mammals**. [**Consult manufacturer for technical assistance to help determine the size of charger needed and to discuss any concerns about safety issues related to electric fencing systems.] The grounding mechanism ensures that the pulse flows through the fence wires. The grounding rod should be a copper or copper-coated rod or a galvanized steel rod driven at least 2 feet into the ground. To enhance the deer repelling effectiveness of portable electric fences, add "electrified Hot Tape" approximately 42" above the ground using 45" posts spaced every 25'. When all the components are in place, the fencing system becomes an energized barrier to animals. *continued on back of page*



Sources for Portable Electric Fences

Listed below are the names and addresses of several fence companies. This is not an exhaustive list, nor is it an endorsement by Rutgers Cooperative Extension of the companies listed. If you call the companies below, be sure to ask for technical assistance before ordering.

Premier Fence Systems 2031 300th Street Washington, IA 52353 (800) 282-6631 FAX: (800) 346-7992	MAX-FLEX Systems US Highway 219 Lindside, WV 24951 (800) 356-5458	K Fence Systems RR 1, Box 195 Zumbro Falls, MN 55991 (507) 753-2706	Kencove Farm Fence, Inc. 111 Kendall Lane Blairsville, PA 15717 (800) 536-2683
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In addition, check your local yellow pages under “Landscape designers and consultants”, “Farm supplies”, or “hardware”. The **Internet** can also provide valuable assistance for information on fencing and wildlife damage. Try starting a search using such terms as “fencing, wildlife damage”, or “crop damage, deer”.

Commercial fencing designs, including portable electric fencing are on display at the Center for Wildlife Damage Control, Rutgers University, Snyder Research and Extension Farm, 140 Locust Grove Road, Pittstown, NJ 08867, (908) 730-9419.

Portable Electric Fencing Systems

Fence Type	Components	Benefits	Price Range	Other Notes
22 Inch Electric Net	9 live horizontal wires	Lower wires are closer together for small animal control.	\$.60- \$.70 per foot	Hot Tape* can be added at 33" and 42" for deer control (you will need additional 45" posts placed every 25' to support the Hot Tape).
33 Inch Electric Net	8 live horizontal wires	Ideal for home gardeners and or protecting high cash value crops.	\$.70- \$.80 per foot	Hot Tape* should be added at 42" for greater deer control (you will need additional 45" plastic posts placed every 25" to support the hot tape).
42 Inch Electric Net	9 live horizontal wires	Fencing system aimed specifically for deer control.	\$.80- \$.90 per foot	New designs are being developed addressing the need for cost effective deer control systems.
Hot Tape	1/2 inch wide ribbon containing conductive strands of stainless steel wires and strands of nylon.	Cost effective strategy for areas under one acre.	\$.08- \$.12 per foot (Posts should be spaced 25' apart)	For improved deer deterence, Hot Tape* should be placed 42" above the ground.
*Helpful Hint: Growers and home gardeners have had success “baiting” Hot Tape by dabbing it with peanut butter. The strategy encourages deer to inspect and taste the bait. The deer receives an initial shock, thus insuring the animal is frightened by the fence, with no permanent injury to the deer.				

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