



Rabbit Management

University of Nebraska—Lincoln
Extension

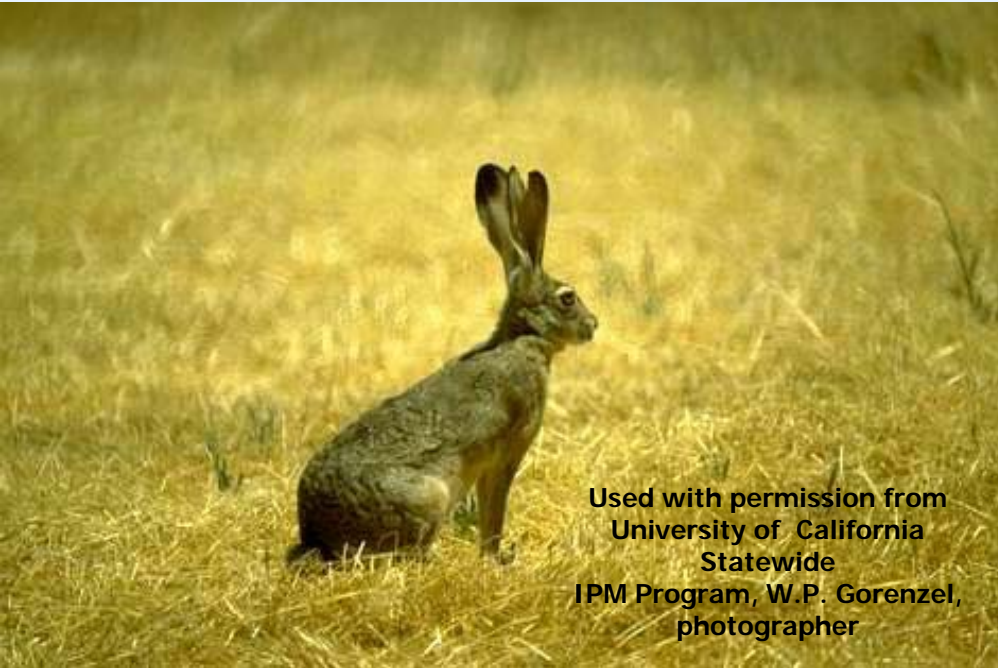


The Cottontail Rabbit

- ❖ Shorter ears than jackrabbits
- ❖ White cotton-like tail
- ❖ Weigh 2-3 pounds
- ❖ Reddish color patch between shoulders



Black-tailed Jackrabbit



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University of California
Statewide
IPM Program, W.P. Gorenzel,
photographer

- ❖ Long ears
- ❖ Has tail that is black on top but white below
- ❖ Weighs 3-7 pounds
- ❖ Can feed in small groups in the late afternoon or evening



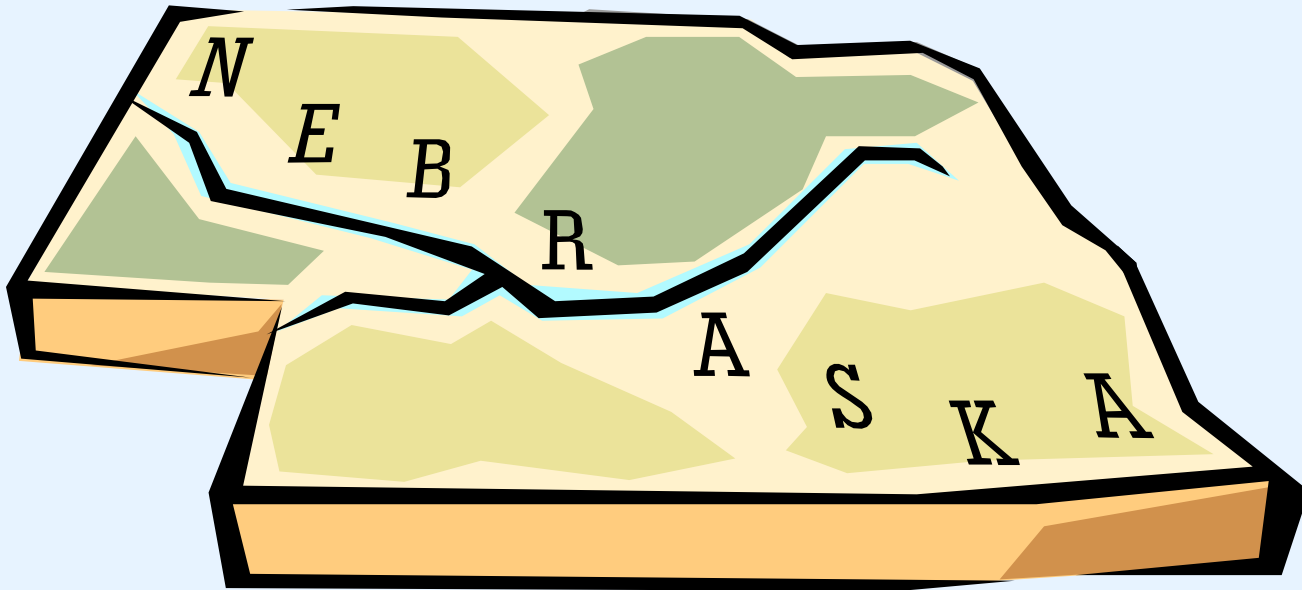
White-tailed Jackrabbit

- ❖ Long ears
- ❖ White tail
- ❖ Weighs 5-10 pounds
- ❖ Tends to be solitary and active at night



Distribution

- ❖ All three species can be found statewide



Cottontail Rabbit Biology

❖ Cottontails:

- Have 3-5 young per litter
- Have 2-3 litters/year
- Raise naked, helpless young in fur-lined cup-shaped nests called forms
- Eat vegetation within 2 weeks of birth
- Leave nest in 5 weeks



Cottontail Rabbit Biology

❖ Lifespan

- Most cottontails live only 1 year
- Only 1 out of 100 live for 3 years

❖ Home Range

- About 10 acres

❖ Diet

- Garden vegetables
- Flowers
- Shrubs
- Stems and leaves



Jackrabbit Biology

❖ Jackrabbits:

- Have 3-5 young per litter
- Have up to 4 litters/year
- Give birth to young capable of running in cupped depressions called forms
- Eat vegetation within 10 days of birth
- Leave nest in 3-4 months
- Also known as "Hares"



Jackrabbit Biology

❖ Lifespan

- Less than 2 years

❖ Home Range

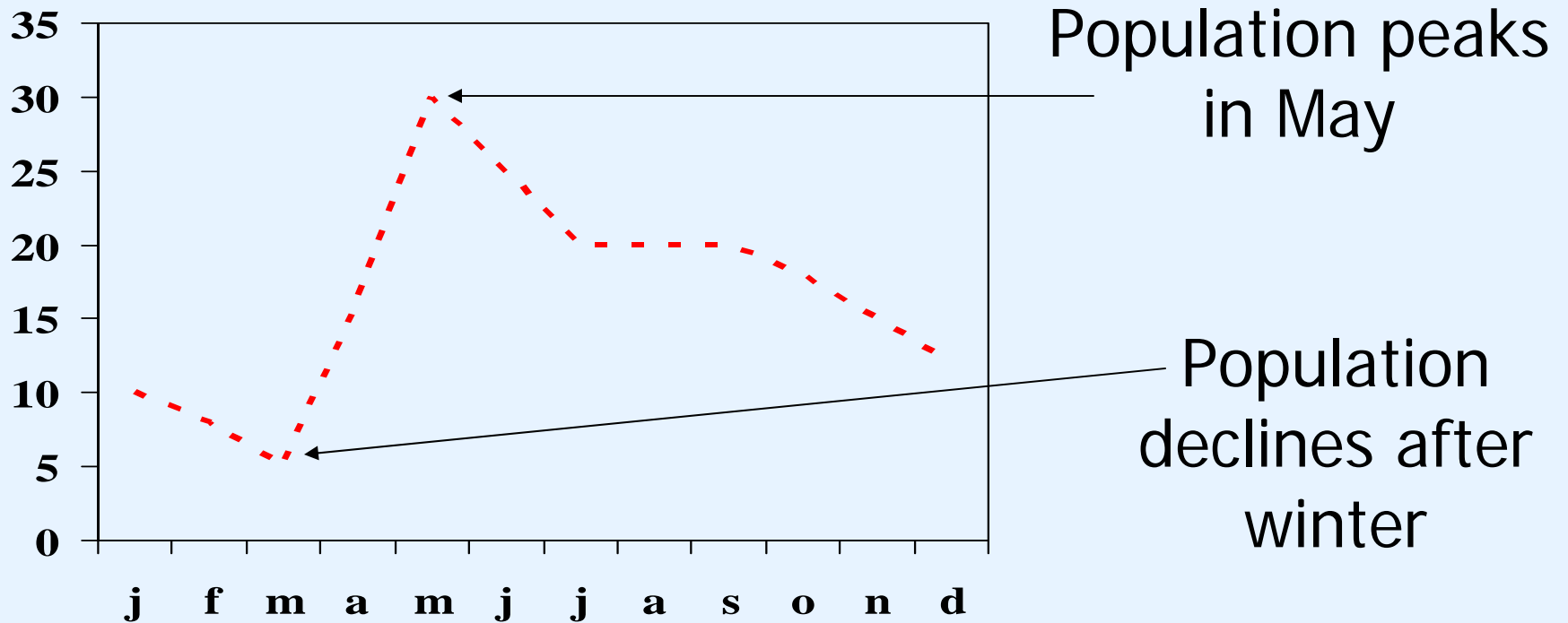
- About 50 acres

❖ Diet

- Grasses
- Shrubs
- Stems and leaves
- Alfalfa



Rabbit Survival Through the Year

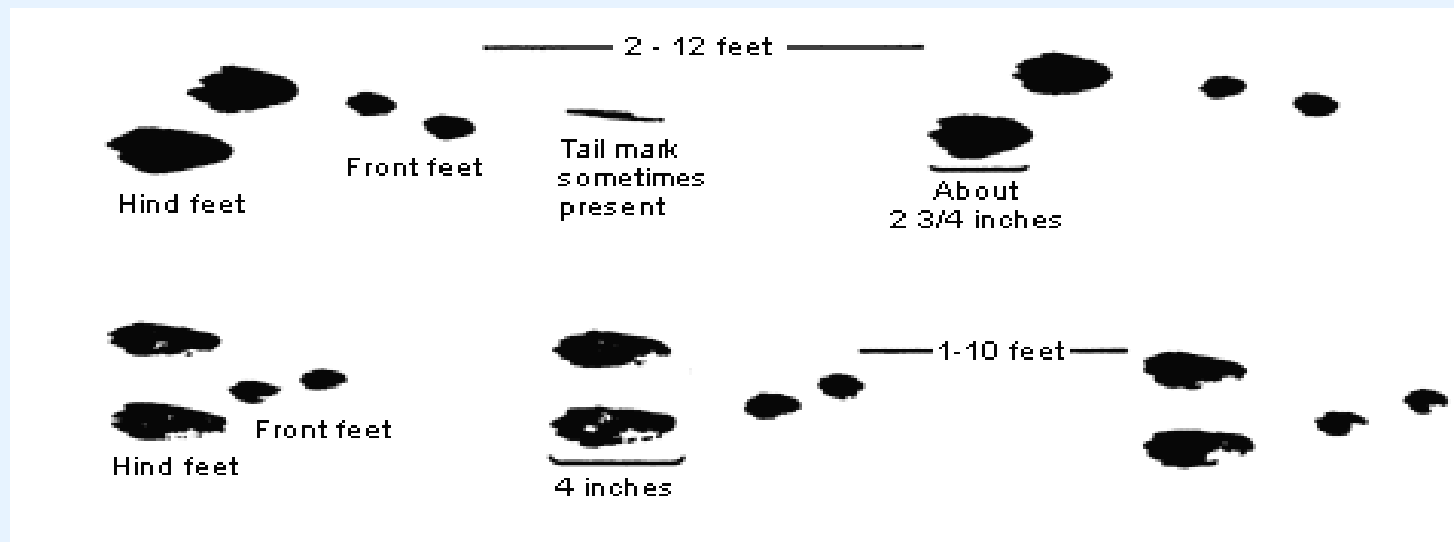


Drawing: University of Nebraska



Rabbit Tracks

- ❖ Front feet are placed one behind the other
- ❖ Hind feet are placed closer to side by side



Cottontail

Jackrabbit

Photo: University of Nebraska



Tree Squirrel Tracks

- ❖ Front feet are placed side by side
- ❖ Tracks will show splayed toes and no hair prints (their soles are bare)
- ❖ Tracks may also encircle or meet tree trunks



Photo: University of Nebraska



Rabbit Droppings

- ❖ Difficult to identify species with droppings alone
- ❖ Cottontail droppings are usually round but can be shriveled or wrinkled
- ❖ Jackrabbit droppings are often flatter

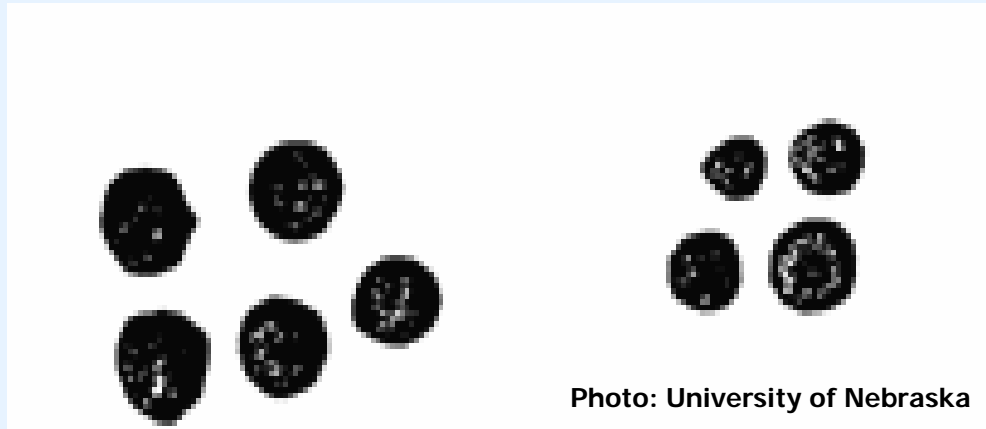


Photo: University of Nebraska



Deer Droppings vs. Rabbit Droppings

- ❖ Deer droppings usually appear in groups
- ❖ Deer droppings more numerous than rabbit droppings
- ❖ Deer pellets are angular while rabbit pellets are spherical

Rabbit



Look for deer tracks too!

Deer



Photo: University of Nebraska

Photo: University of Nebraska



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Rabbit Gnawing

❖ Rabbits gnaw the bark of young woody stems during winter and spring



Photos: University of Nebraska

❖ Rabbits leave $\frac{1}{4}$ inch tooth marks on small branches



Rabbit Clipping vs. Deer Clipping



- ❖ Rabbits clip twigs cleanly at a 45 degree angle
- ❖ Rabbits typically clip within 2 feet of ground



- ❖ Deer leave ragged edges
- ❖ Deer can browse as high as 6 feet off the ground

Photos: University of Nebraska



Learn to Tolerate Some Damage

- ❖ Particularly on shrubs not prized for buds, flowers, or fruit
- ❖ Most shrubs respond well to browsing, but annual repeated damage may dramatically reduce plant vigor



Wildlife Integrated Pest Management

Habitat Modification

**Successful
Damage
Management**

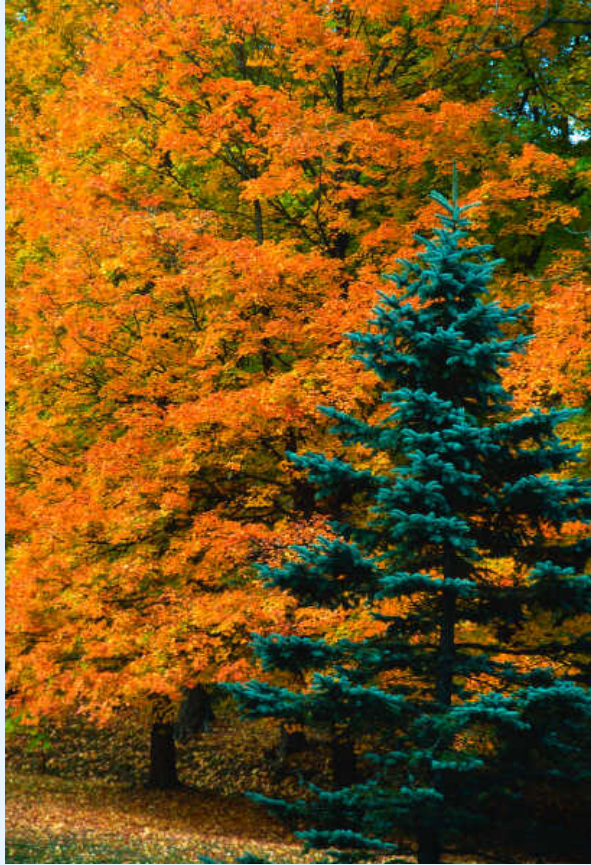
Control Methods

Timing and Monitoring



Habitat Modification

Some trees may be less browsed by rabbits than others



❖ Trees

- Cypress
- Hackberry
- Magnolia
- Oak
- Redbud
- Spruce



Habitat Modification

Some shrubs may be less browsed by rabbits than others

❖ Shrubs

- Barberry
- Cinquefoil
- Cotoneaster
- Lilac
- Sage
- Viburnum



Photo: University of Nebraska



Remove Rabbit Harborage

- ❖ Clean up brush piles
- ❖ Mow tall grass
- ❖ Prune low-growing shrubs
- ❖ Store lumber off the ground
- ❖ Block rabbit access below porches and sheds



Photo: University of Nebraska



Protect Individual Trees

- ❖ Use plastics and other materials that are durable and will expand with the plant's growth
- ❖ Make tree wraps or fences at least 30" to 36" high
- ❖ Use mesh < $1 \frac{1}{2}$ "



Fencing is Very Effective

Use fence with $< 1 \frac{1}{2}$ " mesh

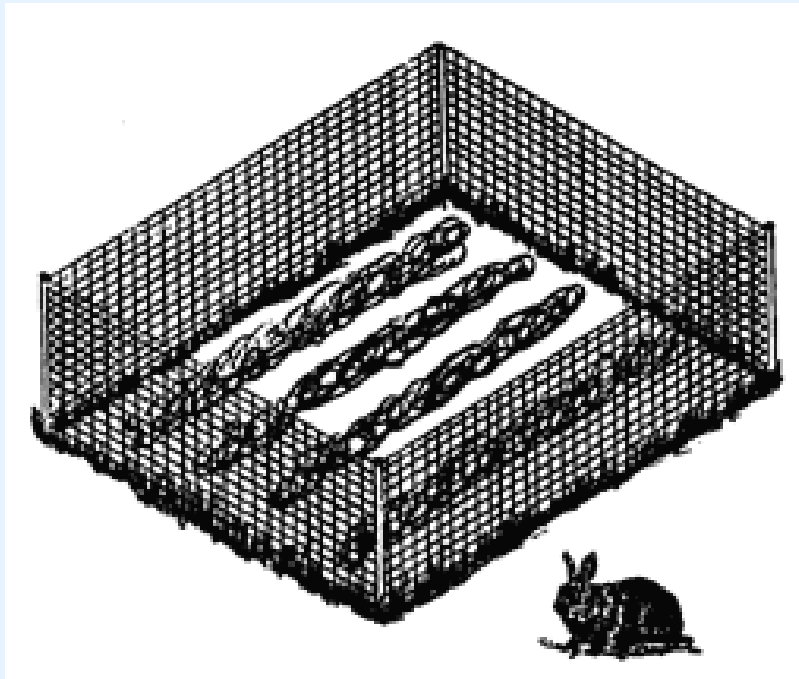


Photo: University of Nebraska

❖ Cottontails

- 16" minimum height
- Bury mesh 2-3"

❖ Jackrabbits

- 36" minimum height
- Bury mesh 6"



Account for Snowfall!

- ❖ Protect those ornamentals during winter!
- ❖ Make fences high and strong enough to accommodate heavy snowfall

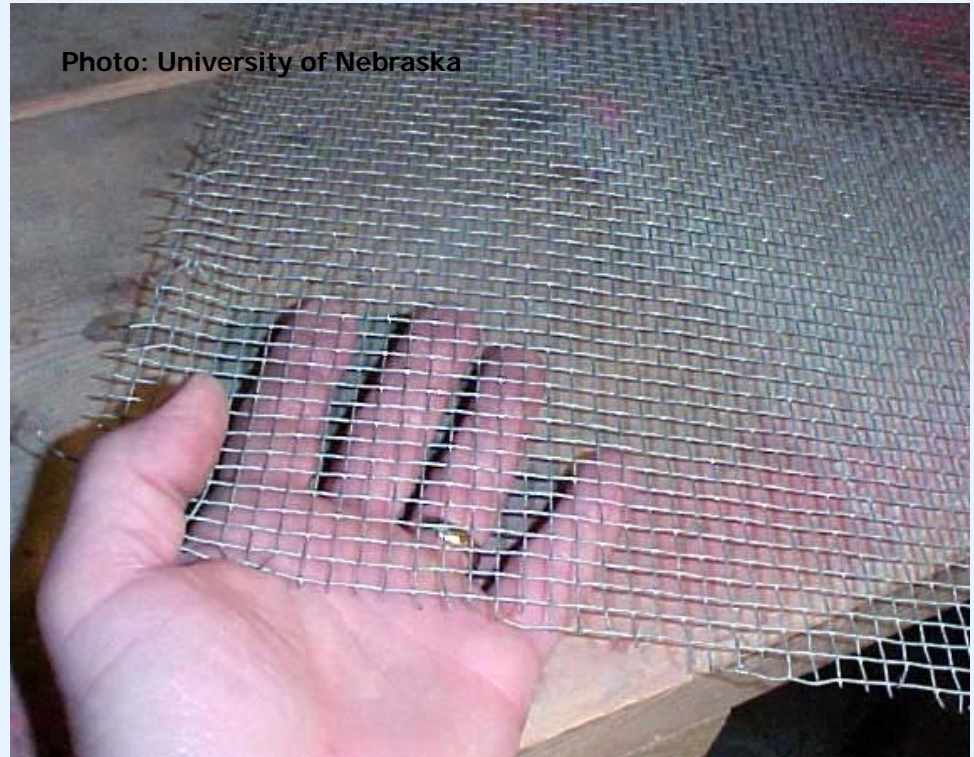


Snow can permit a rabbit to jump the fence



Fencing Material

- ❖ Hardware cloth is expensive but durable
- ❖ Poultry wire is inexpensive but not as durable
- ❖ Both types of fencing materials are effective



Supplement Existing Fences



- ❖ Add poultry netting to the lower two feet of an existing wire fence
- ❖ Bury netting 2-3 inches into the ground



Frightening Devices

Often provide only limited relief from the damage

❖ Visual

- Scarecrows
- Human effigies

❖ Audible

- Pyrotechnics
- Shooting overhead

❖ Physical

- Motion-activated water sprays



Photo: University of Nebraska



Limitations of Frightening Devices

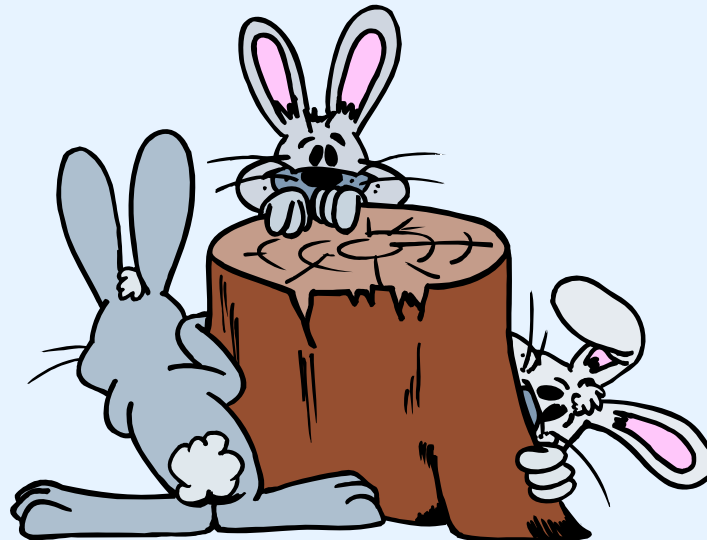
- ❖ Rabbits quickly habituate to them
- ❖ Ultrasonic devices have **not** been proven effective as frighteners

Avoid Ultrasonic Devices



Repellents

- ❖ Invoke a pain or fear response
- ❖ Most are short-lived in their effect
- ❖ May need to be re-applied after sprinkler irrigation, rain, or new growth



Repellents that Induce Pain

- ❖ Capsaicin or hot pepper extract (Scoot TM, Shotgun TM; Deer-off TM, Bulb guardTM)
- ❖ Ammonium or potassium salts of fatty acids (Hinder TM, Grant's, M-pede TM)
- ❖ Denatonium saccharide (RoPel TM), a bittering agent





Repellents that Induce Fear

Taste repellents tend to work better than area repellents

- ❖ Eggs (Big Game Repellent TM, Deer-Away TM, Get Away TM)
- ❖ Thiram fungicide (Spotrete TM)
- ❖ Bone meal, blood meal (Repel TM)
- ❖ Predator urine or feces (Shake-Away TM)
- ❖ Garlic (Plant Pro-tec,)



Apply Repellents Correctly

- ❖ Follow the label's instructions carefully
- ❖ Several deer repellents are also listed for rabbits
- ❖ Most rabbit repellents are not registered for use on plants destined for human consumption
- ❖ Some can be applied to perimeter areas or to the soil



Extending Rabbit Repellent Effectiveness

❖ Some repellents can be enhanced in their longevity and/or effectiveness by mixing them with other products, such as

- Roplex TM
- VaporGuard TM
- Wiltpruf TM



Cage Trapping

- ❖ Traps must be at least 7" X 7" at the door
- ❖ Work best during winter/early spring
- ❖ Good cold-weather baits include cabbage, ear corn, dried apple, and dried alfalfa or clover



Photo: University of Nebraska



Cage Trapping



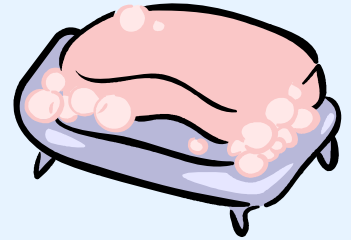
Photo: University of Nebraska

- ❖ Traps can be set near natural borders that attract rabbits
- ❖ Place traps under shade in shrubbery where possible





Cage Trap Safety



- ❖ Wear leather gloves when handling cages
- ❖ Use only traps in good working order
- ❖ Keep children and pets away from traps
- ❖ Wash hands after handling traps



Cage Trapping

- ❖ Traps must be checked daily (including weekends and holidays!)
- ❖ Rabbits must be released on-site or euthanized
- ❖ Translocation beyond 100 yards is illegal in Nebraska
- ❖ Traps may lure other wildlife, such as skunks, instead of the desired rabbits. Learn how to handle a trapped skunk BEFORE setting a cage trap!



Cage Trapping

Photo: University of Nebraska



Do you know how to handle a trapped skunk?

Check out:

<http://icwdm.org/wildlife/skunk/skunkrelease.asp>



Cage Trapping

❖ Handling trapped skunks

- Prevent skunk captures by closing trap before sunset and resetting in the morning; skunks are nocturnal
- If a skunk is captured, release it carefully.
 - ✓ Gravity door trap-Use a long pole while remaining a distance away to turn the trap upside down, causing the door to open as a result of gravity.
 - ✓ Spring door trap-Approach and cover the cage with blankets before releasing the door and moving quietly away



Shooting

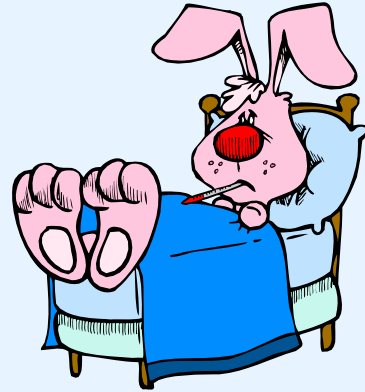
- ❖ Cottontails and jackrabbits are game species in Nebraska
- ❖ Rabbit hunting is allowed in rural areas during the fall and winter with a small game hunting permit
- ❖ Check local regulations before discharging a firearm



Photo: University of Nebraska



Tularemia



- ❖ Aka "Rabbit Fever"
- ❖ Bacterial disease transmitted to humans by wildlife, ticks, or biting insects
- ❖ It is rare in humans. About 30 cases have occurred in Nebraska over the last decade



Symptoms of Tularemia

- ❖ Sudden onset of high fever and chills
- ❖ Joint and muscle pain (lower back)
- ❖ Headache
- ❖ Swollen or slow-healing wounds
- ❖ Swollen lymph glands
- ❖ May persist for weeks or cause death
- ❖ White spots on liver of rabbit



Precautions Against Tularemia

❖ Use plastic gloves when handling traps or field dressing rabbits



❖ Use tick and mosquito repellents on self and pets



Photos: University of Nebraska



In Summary, Rabbit Management Includes:

- ❖ Landscaping or plant selection
- ❖ Exclusion with proper materials and construction
- ❖ Repellents applied often and generously
- ❖ Cage/box trapping judiciously



Additional Resources

- ❖ Internet Center for Wildlife Damage Management
 - <http://icwdm.org>



Credits

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Credits

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