RATS are PESTS

THEY ARE A THREAT TO . . .

AGRICULTURE

DESTROYERS OF
FEED AND
PROPERTY

HOME

MENACE TO
FOOD AND
PROPERTY

HEALTH

CARRIERS OF
GERMS

INDUSTRY

CAUSE OF
DAMAGE
AND WASTE

IT COSTS \$20.00 TO BOARD ONE RAT FOR ONE YEAR.

Join in the campaign
to keep them out of
Alberta, the only rat-
free area on the
North American
Continent.

For further information, write to
FIELD CROPS BRANCH,
Alberta Department of Agriculture,
Edmonton, Alberta
or contact your District Agriculturist.

KILL RATS WITH WARFARIN OR PIVAL

PREPARED BY :
J. B. GURBA and W. LOBAY
Crop Protection and
Pest Control

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FIELD CROPS BRANCH

"KROO"

KEEP RATS
OUT OF
ALBERTA

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Minister of Agriculture

USE OF RAT POISONS

WHAT ARE
WARFARIN
AND PIVAL
?
BAITING
WITH
WARFARIN
AND PIVAL

These poisons are anti-coagulant compounds, which are tasteless and odorless. Rats eat them quite readily and when taken internally over a period of time, painless death results from internal bleeding.

Warfarin and Pival come in 3 forms — (1) Concentrate, (2) Ready-to-Use Bait Mixture, and (3) Water Soluble Salt.

If using 0.5% concentrate, mix 1 part by weight of Warfarin or Pival with 19 parts by weight of bait. Coarse rolled oats makes a good cereal type bait. A small quantity of mineral oil or other edible oil should be added to make dusty bait more attractive.

Ready-to-Use Bait Mixture requires no addition of bait and can be set out as packaged.

Water Soluble Warfarin is the sodium salt of Warfarin; Water Soluble Pival is the sodium salt of Pivalyn. Both come in small package form and readily dissolve in water to form a tasteless, odorless solution. Water baits are especially useful where water is not readily available and plentiful food makes dry bait less successful. These are best set out in chick founts or shallow dishes, under non-freezing conditions. Keep containers clean at all times.

Determine where rats are located. Look for burrows, tracks, trails, droppings, etc., around barns, coops, feed bins, garbage dumps, etc. Baiting must be done for a 2 to 3-week period as rats require 4 or 5 feedings or water-bait drinks within a 10-day period.

Keep away all other feeds and foods while baiting with Warfarin or Pival to attract rats to bait stations.

Place mixed Warfarin or Pival bait (2 oz. to 1 lb., depending on rat population) where rats feed or travel — in rat runways, along walls or close to watering places. Water can be placed near bait to attract rats and encourage them to eat more bait. Set out bait in clean, shallow containers, preferably metal, as coffee tins or pie plates, to keep bait dry and fresh. Water bait can be used successfully with dry bait, in separate containers, placed close together.

Protect bait from children, pets and domestic animals with boards or bait boxes. Make bait stations 4 to 6 feet long, from any boards, 6 to 8 inches wide, to keep the poison out of reach of children and pets. Fasten securely. Sample models of home-made bait stations are shown below. Other types can be improvised to fit particular baiting places. Chicken wire will keep pets and fowl out, yet permit rats to enter freely.

Keep bait stations supplied with fresh bait at all times. Use gloves when handling poison bait and stations to avoid contamination with human scent. Examine bait stations daily during first week, regularly thereafter. Rats should not be short of bait for more than 48 hours. Attention means success.

After rats have been exterminated, keep a few permanent stations supplied to catch stragglers and rats moving in.

After third day of baiting, watch closely for dead or weak rats. Kill sick rats and burn or bury carcasses. Pets and hogs may become sick from eating rat carcasses. Feed domestic animals well during rat baiting to further prevent eating of poison and poisoned rats.

The above are a few basic suggestions. The Norway rats are extremely clever; the local operator may have to use various other means to outwit them.

**HOME
MADE
BAIT
STATIONS**

**PRECAUTIONS
WITH
WARFARIN
AND PIVAL**

Normally Warfarin or Pival are not harmful to humans or livestock unless taken in considerable quantities over a period of time. In case of poisoning, induce vomiting followed by liberal dose of Epsom salts. Call a doctor immediately. Treatment should include transfusions of whole blood and intravenous and oral administrations of Vitamin K preparations as in overdose of dicumarol.

HOW TO KEEP ALBERTA RAT FREE!

RAT PROOF YOUR BUILDINGS!

1. Permanent buildings should be placed on concrete foundations that extend at least two feet below ground and eighteen inches above ground.
2. Cover all openings with heavy screening.
3. Place non-permanent buildings, lumber, etc., at least twelve inches above ground. Rats dislike light.
4. Remove manure, trash, garbage, etc., to eliminate rat harborages and shelter.

STARVE THEM OUT!

1. Avoid spilled feed around barns, pig pens, etc.
2. Place garbage in covered, metal containers.
3. Keep rats out of granaries and feed bins by rat-proofed construction.

WATCH FOR THEM!

Report any indication of Norway rats to your local Pest Control Officer or District Agriculturist.

DESTROY THEM!

1. Trapping, etc.
2. Fumigation by calcium cyanide or carbon-monoxide engine exhaust gas in sealed harborages.
3. Poisoning — Warfarin and Pival are supplied free of charge by the Alberta Department of Agriculture. Contact your local Pest Control Officer or Municipality for a supply of poison and instructions on killing rats (See inside of folder.)