

Approved March 17, 1987  
Date

MINUTES OF THE HOUSE COMMITTEE ON AGRICULTURE AND SMALL BUSINESS

The meeting was called to order by Representative Clifford V. Campbell at  
Chairperson

9:06 a.m./~~p.m.~~ on February 26, 1987 in room 423-S of the Capitol.

All members were present except: Representative Goossen, who was excused.

Committee staff present: Norman Furse, Revisor of Statutes Office  
Raney Gilliland, Legislative Research Department  
Pat Brunton, Committee Secretary

Conferees appearing before the committee: Chip Wheelen, Pete McGill and Associates,  
representing Kansas Legislative Policy  
Group  
Mike Beam, Executive Secretary, Cow-Calf/  
Stocker Division, Kansas Livestock  
Association  
Floyd Renken, Smith County, Downs, Kansas

Hearings were held on House Bill 2235 - an act concerning wind-blown dust and soil erosion; relating to special assessments for work involving the planting or cultivating of land.

Raney Gilliland explained HB 2235 for the committee stating that the bill amends the section of the statutes dealing with wind-blown dust and soil erosion. He further stated that currently, assessments may be made on land owners for soil erosion work done in their absence or in case of need for soil erosion work to be done on that particular land. This particular bill addresses the fee that could be charged per acre for that soil erosion work done because of the county's action. Currently, that maximum assessment is \$3.00 per acre. The bill would permit the Board of County Commissioners, at the beginning of any calendar year, to determine the adequate amount of the cost associated with this kind of work to be done and to set that amount at some point above the \$3.00 per acre. The bill also maximizes the amount that a landowner can be charged in any one year and that would be the \$3.00 or the amount fixed by the Board of County Commissioners in any one year to cover the cost of work done.

Mr. Gilliland also read a statement by Representative Max Moomaw, sponsor of HB 2235, who was unable to attend the committee meeting, Attachment I.

Chip Wheelen testified on HB 2235 representing the Kansas Legislative Policy Group which is an organization of rural county commissioners. Mr. Wheelen appeared in support of HB 2235, Attachment II.

Mike Beam, representing the Kansas Livestock Association, testified in favor of HB 2235, Attachment III.

A question and answer period followed each presentation. Hearings were then closed on House Bill 2235.

Floyd Renken appeared before the committee explaining how the musk thistle weevil helps control thistles. He further stated that this practice would not pollute the atmosphere, such as would sprays, Attachment IV.

The meeting adjourned at 9:39 a.m.

The next meeting of the House Committee on Agriculture and Small Business will be February 27, 1987, at 9:00 a.m. in Room 423-S.





TOPEKA

HOUSE OF  
REPRESENTATIVESCOMMITTEE ASSIGNMENTS  
MEMBER: ECONOMIC DEVELOPMENT  
TRANSPORTATIONMAX MOOMAW  
ASSISTANT MAJORITY LEADER  
REPRESENTATIVE, 117TH DISTRICT  
HODGEMAN, LANE AND  
PARTS OF FINNEY AND  
NESS COUNTIES  
R.R. 2, BOX 45  
DIGHTON, KANSAS 67839-9801

TO: House Agriculture and Small Business Committee  
Clifford Campbell, Chairman

FROM: Representative Max Moomaw

RE: House Bill 2235

DATE: February 26, 1987

Mr. Chairman and Members of the Committee:

House Bill 2235 allows County Commissioners to set an adequate rate of compensation for farm work that is done by the county or someone employed by the county. In my home county (Lane County) the current rate for custom farming is approximately \$4.50 per acre.

Representative Mollenkamp, Neufeld, or Crumbaker can explain how the abrasive action that takes place when one piece of ground starts blowing can start additional land blowing and destroy crops. Most farmers take care to prevent their land from blowing.

In some cases where someone lives out of town or refuses to take action, the county has to step in and do the work. This bill will allow the commissioners to pay for this work at local custom farming rates. The second part of the bill increases the rate at which the commissioners can recover the cost of the work.

Please accept my apologies for not being present for this hearing.

ATTACHMENT I  
Feb. 26, 1987



## Kansas Legislative Policy Group

301 Capitol Tower, 400 West Eighth, Topeka, Kansas 66603, 913-233-2227

TIMOTHY N. HAGEMANN, Executive Director

February 26, 1987

TESTIMONY  
to  
HOUSE COMMITTEE  
on  
AGRICULTURE and SMALL BUSINESS  
House Bill 2235

Mr. Chairman and members of the Committee, I am Chip Wheelen of Pete McGill and Associates. We represent the Kansas Legislative Policy Group which is an organization of rural county commissioners. We appear today in support of HB 2235.

Those of you from the drier regions of the State are aware of the problems caused and damage done by wind erosion of the soil. The 1937 Legislature recognized this and declared wind and dust storms "to be destructive of the natural resources of the state and a menace to the health and well-being of our citizens."

The 1937 Legislature also prescribed duties of county commissioners to inspect land from which soil is blowing and to initiate remedial action. This includes "prompt cultivation of the soil" by ordering that the land be "disced, or listed, or chiseled, or cultivated in any other particular manner."

The same Legislature authorized boards of county commissioners to levy the cost of such work against the land as a special assessment. That authority, which is limited to \$3.00 per acre total and to \$1.00 per year per acre is found in K.S.A. 2-2008. That statute was last amended in 1955.

House Bill 2235 simply allows boards of county commissioners to determine at the first meeting each year what is a reasonable cost per acre for such work. The special assessments would be limited to \$3 per year per acre.

In summary, HB 2235 brings K.S.A. 2-2008 thirty two years up to date. We respectfully request that you recommend it for passage.

Thank you for your consideration.



2044 Fillmore • Topeka, Kansas 66604 • Telephone: 913/232-9358  
Owns and Publishes The Kansas STOCKMAN magazine and KLA News & Market Report newsletter.

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STATEMENT BY THE  
KANSAS LIVESTOCK ASSOCIATION  
in support of  
HOUSE BILL 2235  
before the  
HOUSE AGRICULTURE AND SMALL BUSINESS COMMITTEE  
REPRESENTATIVE CLIFFORD CAMPBELL, CHAIRMAN  
presented by  
MIKE BEAM  
EXECUTIVE SECRETARY  
COW-CALF/STOCKER DIVISION  
February 26, 1987

Mr. Chairman and committee members, the Kansas Livestock Association supports HB 2235 which will allow county commissioners to collect the full costs of wind erosion maintenance that may be performed in accordance with K.S.A. 2-2004 or 2-2006.

Wind erosion causes two basic problems. First, this erosion can cause serious degradation of soil which is our basic agriculture resource. It's been estimated that on 141 million acres of U.S. cropland, about 34% of the total, the annual erosion averages more than five tons an acre. In 1983, Senator Armstrong from Colorado stated on the Senate floor that "it takes

ATTACHMENT III  
Feb. 26, 1987

nature more than 100 years to produce a single inch of topsoil, but that inch of soil can blow away in less than an hour if not protected against erosion." If county commissioners wish to exercise their power in reducing wind erosion, we should have statutes that afford them this opportunity. This proposal, HB 2235, gives them more latitude to recapture the county's expenses if it is necessary for government action.

A second problem of wind erosion is traffic safety. Those of you who have driven near a wind blowing field know how dangerous this situation can be. Just a few weeks ago a major highway in north central Kansas was closed because of poor visibility caused by wind erosion. I suppose a county could conceivably be held liable in a traffic accident if they were negligent in their responsibilities to control wind erosion. Again, HB 2235 would be helpful to encourage county commissioners to exercise their erosion control powers as stated in K.S.A. 2-2004 to 2-2008.

Current law limits the amount counties may recover from wind erosion prevention to \$3 per acre and no more than \$1 per acre per year. This provision, as established in K.S.A. 2-2008, was last amended in 1955. We all know that cultivation costs have increased dramatically during the last 30 years. Attached is a page from the 1985 Kansas Custom Rates survey which gives an illustration of today's charges for field work that a county may contract to combat wind erosion. Please note that chiseling 4"-12" cost an average of \$5.86/acre in 1985. County commissioners should have the flexibility to charge more than \$3 if it is needed.

Thanks for the opportunity to express our support of HB 2235 and we urge the committee to vote favorably for its passage. I would be happy to respond to any questions or comments.

# LAND TILLAGE

Custom operators charged an average of \$4.42 per acre for field cultivation. Stiff shank cultivation averaged \$4.67 per acre compared to \$4.66 in 1984. Wheel springtooth cultivation averaged \$4.24 per acre, up 21 cents from 1984.

CUSTOM RATES FOR FIELD CULTIVATION, 1985

District	Shank Cultivator			Wheel Springtooth		
	No. of Rpts.	Dollars Per Acre Range	Dollars Per Acre Avg.	No. of Rpts.	Dollars Per Acre Range	Dollars Per Acre Avg.
	Northwest	4	3.00-6.00	3.94	7	3.00-5.50
West Central	1/	1/	1/	1/	1/	1/
Southwest	7	2.75-5.50	4.25	5	3.00-5.00	3.90
North Central	3	3.75-5.00	4.42	1/	1/	1/
Central	6	3.00-8.00	4.83	9	3.00-6.50	4.50
South Central	10	3.00-4.50	3.93	12	2.50-6.00	4.20
Northeast	10	4.50-7.00	5.37	} 8	3.00-7.00	4.46
East Central	8	4.00-8.00	5.88			
Southeast	6	4.00-6.00	4.63			
State	56	2.50-8.00	4.67	42	2.50-7.00	4.24

1/ Insufficient reports, included in State totals.

CUSTOM RATES FOR LAND TILLAGE, KANSAS HISTORICAL AVERAGES

Type of Operation	1970	1975	1980	1981	1982	1983	1984	1985
Dollars Per Acre								
Discing	1.72	2.92	4.37	4.69	4.72	4.95	4.94	4.82
One-Way Disc	2.13	3.44	4.60	4.66	4.82	5.21	5.27	4.82
Offset Disc	NA	3.64	5.01	5.42	5.39	5.58	5.50	5.36
Spiketooth Harrow	1.11	1.77	2.98	3.28	3.56	3.32	3.49	3.54
Springtooth Harrow	1.32	2.18	3.23	3.55	3.69	3.63	3.74	3.63
Chisel 4-12"	NA	4.26	1/ 5.76	5.90	5.99	6.05	6.46	5.86
Chisel over 12"	NA	1/	7.05	7.62	7.50	8.00	8.03	7.45
Undercutter	1.88	3.47	4.13	4.37	4.47	4.45	4.64	4.34
Moldboard Plow	4.10	5.77	7.87	7.97	7.93	8.49	8.63	8.24
Shank Cultivator	NA	NA	4.28	4.55	4.58	4.72	4.66	4.67
Wheel Springtooth Cultivator	NA	NA	4.17	4.11	4.06	4.23	4.03	4.24

1/ No differentiation was made concerning depth.



# Introduced Weevil Helps Control Musk Thistle

By Melvin K. McCarty,  
William O. Lamp, Alex R. Martin  
and Fred W. Roeth

Musk thistle is a weed of pastures and rangelands that reduces forage yields and hampers the movement of livestock. When it invades new areas, the thistles quickly produce many seeds and within a few years can form an impenetrable stand of plants (Figure 1).

Recent studies of the musk thistle in the United States have determined that it consists of three separate but similar species; *Carduus nutans*, of limited occurrence in the northeastern portion of the United States and adjacent Canada, primarily in Ontario, *Carduus macrocephalus* in Montana and other intermountain states and *Carduus thoermeri*, of primary importance in the United States and Saskatchewan, Canada.

Although chemical control of thistles with herbicides has existed for many years, the use of biological control has only recently become available. Biological control of weeds is the use of living organisms, such as insects, to reduce weed infestations.

Unlike chemical control, biological control cannot eradicate a weed since some host plants are needed to support populations of the biological control agent. However, biological control is an inexpensive, long-lasting method when lower weed populations are acceptable. In Nebraska, a biological control agent is now available for release against musk thistle: the musk thistle seed weevil, *Rhinocyllus conicus*.

## Life History

The adult weevils are dark brown with small yellow spots on their backs. They are 3/16 to 1/4 inch long and their snouts are broad and short (Figure 2). They overwinter as adults and are generally first seen on thistles in early May.

After feeding and mating on thistles, the females lay eggs on the bracts of developing flower heads (Figure 3) and occasionally on stems under conditions of high insect density. Eggs are laid from late May through June. The eggs are covered with a light brown substance that darkens as it dries. The females lay the most eggs on terminal heads of

the plants. However, as weevil populations build up the other flower heads begin to receive more eggs. Each female lays 100 to 150 eggs over a 15 to 20 day period.

The larvae hatch from the eggs and bore into the base of the flower (receptacle) or into the stem. Larval feeding in the receptacle prevents the development of some or all of the seed within the head (Figure 4). Mature larvae are about 1/4 inch long and are white with a brown head.

At a certain stage of development, the larvae stop feeding and pupate within a hard brown chamber in the receptacle. The pupa is a resting stage before transforming to the adult, and has rudimentary wings unlike the larvae. In a few days the final change from pupa to adult takes place (Figure 5). The new adults leave the heads beginning in July to find overwintering sites, and become dormant until the next spring.

## Distribution

The musk thistle seed weevil is originally from southern Europe and was introduced to the United States in 1969. Nebraska has had successful releases starting in 1972 and the weevil now exists in about 30 counties.

The weevil feeds and reproduces primarily on musk thistle and other thistle species, including plumeless, with some activity on the Scotch thistle, and the milk thistle. The three large-flowered *Carduus* thistle species are its preferred hosts. Extensive host specificity tests conducted in Italy, Switzerland, and by the USDA in the United States have demonstrated that the weevil will not become a pest on other plants.

## Beneficial Effects

Adult feeding causes small brown spots on thistle leaves, however this has little effect on the plant. The larvae, by feeding in the base of the flower head (receptacle), interfere



Figure 1. A stand of musk thistle that eliminates forage production and impedes movement of livestock.

with seed production and viability. High densities, such as 30 or more larvae per head, prevent the development of any seed within the head.

During early stages of colony establishment, insect numbers are concentrated in the terminal head and terminals of upper branches. Some of the late flowering, small heads that are low on the plant will probably escape infestation, resulting in limited seed production even after the insects are established. Generally, 6 to 8 years are required for weevil populations to build up before appreciable reduction of musk thistle seed production can be observed. After this time thistle populations should decline as the thistle seed supply in the soil is depleted. Therefore a decline in thistle populations is not likely until 7 to 10 years after the initial release.

### Release

The release of the weevil into new areas should be made on sites that can be left undisturbed for several years. This will allow the weevil to become established, develop large numbers and spread to nearby thistle populations.

Weevil adults can be introduced to thistle infestations two times during the year. In the spring, the weevils are collected early while feeding on thistles and transported to new sites to allow females to lay eggs.

Alternatively, the weevils are collected in the seed heads during July when the weevils have reached the late pupal or early adult stage of development. The heads are then transported to the release site to allow the new adults to overwinter. This second method has the risk of introducing a new species of thistle to an area since thistle seeds may be introduced with the weevils. If this method is to be used, the thistle species at the introduction site should be the same as the species at the collection site.

Large scale spring collections have been made near Bozeman, Montana in cooperation with USDA-SEA Rangeland Insect Labo-

(Continued on next page)



Figure 2. Adult stage of the musk thistle weevil.

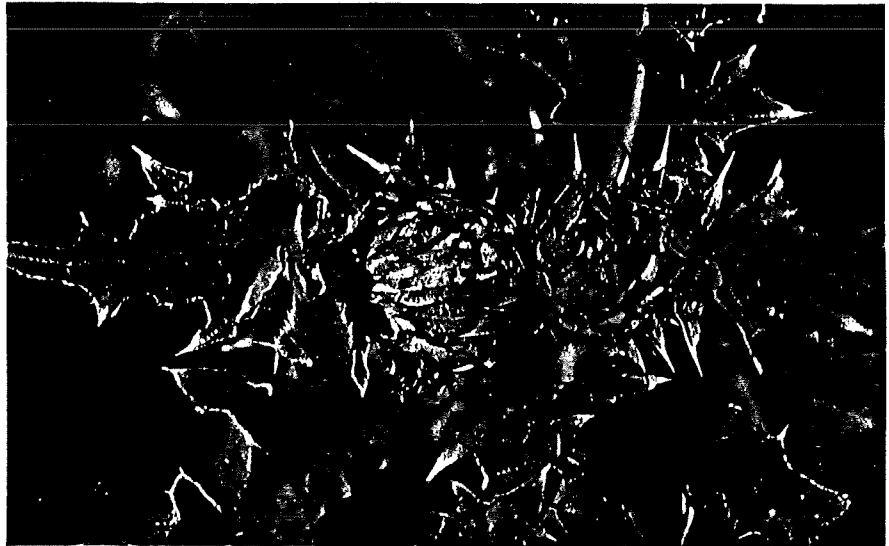


Figure 3. Musk thistle weevil eggs on the bracts of the flower head.



Figure 4. Musk thistle head showing pupa and chambers in the receptacle.

**Musk Thistle . . .**

ratory personnel. In Nebraska, weevils are available from Jim Holmes, of Arcadia, Nebraska in July. When weevil numbers increase at other release sites to the point that collection will not endanger the colony, interested individuals may make arrangements locally for collection.

Biological control alone will not eradicate a weed because there have to be some host plants to allow survival of the predator. Preliminary data indicate that the musk thistle weevil will have a marked effect on seed production when weevil populations have time to increase.

It will take a number of years for weevil numbers to build up and for the reservoir of thistle seed in the soil

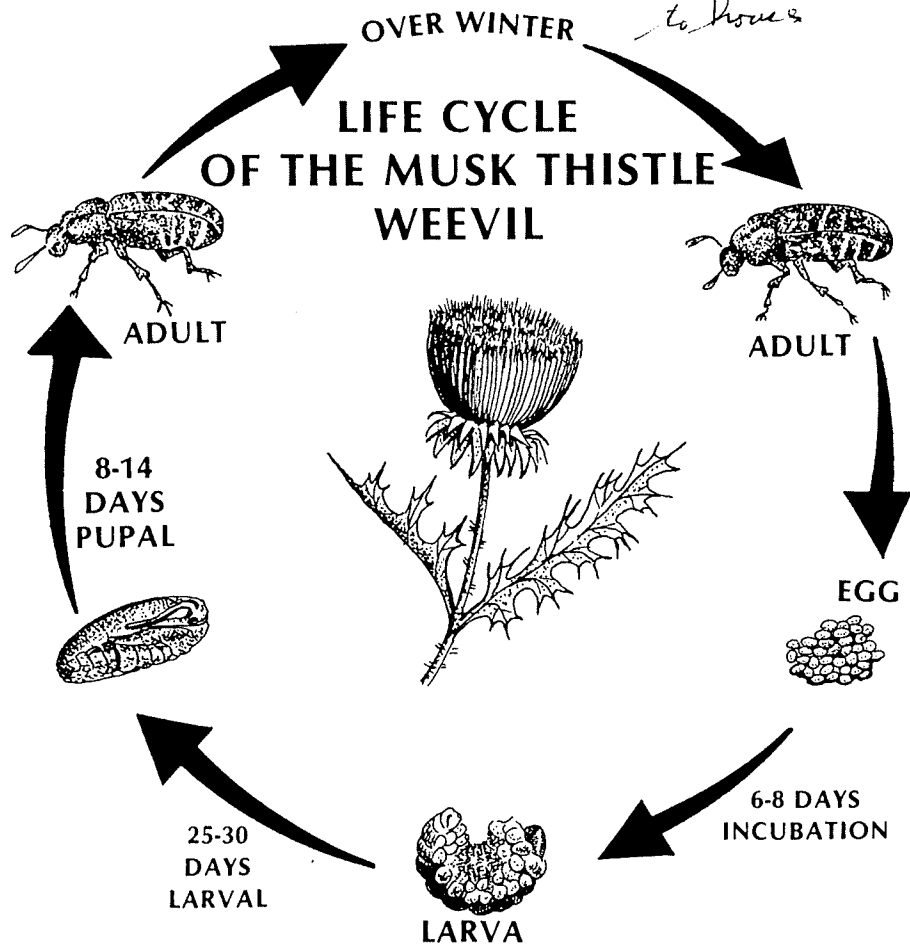
to be reduced. Additional research is in progress to develop use of other organisms that will attack the thistle during another portion of its life cycle.

The biological control technology developing will have a significant effect on musk and plumeless thistle populations in Nebraska and neighboring areas. We will continue to work with any promising leads toward control of these thistles. □

MELVIN K. McCARTY is research agronomist, USDA, SEA/AR; WILLIAM O. LAMP is former research assistant, Agronomy; ALEX R. MARTIN is Extension agronomist (weeds), all with the Institute of Agriculture and Natural Resources and FRED W. ROETH is Extension weed control specialist, South Central Station, Clay Center, Nebraska.

308-789-5710

North of Logo city 141 miles  
West 2 mi on rd 2 mi N on gravel  
to house



## Clean up a thistle patch with a \$200 sack of bugs

Every June, Jim Holmes' neighbors watch with amazement as Holmes walks area pastures filling feed sacks with seed heads from musk thistles.

Holmes, of Arcadia, Nebraska, has no love for the thistles themselves. It's a tiny bug inside the heads that he's after. He sells that bug—the musk this-

tle weevil—for a penny apiece, or \$200 per sack of thistle heads.

Holmes' weevil business is an outgrowth of research at the University of Nebraska. That research determined several years ago that the musk thistle weevil, if in high enough numbers, could biologically control musk thistles. The bug is host-specific—it won't feed on anything else. Its favorite part of the thistle is the receptacle, or base, of the seed head. When it feeds there it destroys the seeds.

"It's a valuable aid in musk thistle control," says M. K. McCarty, who did

the research. "You can't throw the sprayer away, but the weevil helps if you get 10-20 weevils per seed head when they are developing."

Musk thistles usually produce seed over an 8-week period in June and July. That's when the newly hatched weevil larvae need to be present.

Holmes became interested in the weevils when he was looking for an alternative to chemicals in his own pastures. He distributed some of the weevils, got good thistle control, and soon found there was a business in selling the bugs to other farmers. Now, he roams his neighbors' fields to find enough weevil-infested thistle heads.

"I collect them in the early summer," he says. "I put 1,200 to 1,400 dry thistle heads, usually with 20-24 weevils per head, in paper sacks. That's 20,000 to 30,000 weevils, and I sell a sack for \$200. I've sold over 8 million weevils into 7 states."

Holmes ships the bugs in July, and tells customers to distribute the dry heads among a heavy thistle infestation. He says one bag is enough for a quarter section of pasture.

In about a week, the weevils will emerge, lay eggs, and the larvae begin to feed on the heads.

You won't see results right away. Holmes says it would take 6-8 years to see a real reduction in thistle population, mostly because some seeds can lay dormant in the ground that long before they begin to grow.

"The first two years, you're building up weevil numbers," he says. "People who have given them time to work are getting some clean pastures."

Holmes address is Rte. 1, Box 179, Arcadia, NE 68815. Phone: 308/789-6656. He takes orders in May and June, then ships thistle heads in July.

## Beneficial insects help control musk thistle

Entomologists with the Missouri Department of Agriculture and the University of Missouri have been collecting musk thistle weevils this spring to help combat the musk thistle plant.

In a cooperative effort to help Missouri farmers deal with this troublesome weed, entomologists with the Plant Pest Control section of the Missouri Department of Agriculture and the Integrated Pest Management Program at the University of Missouri have been collecting musk thistle weevils from areas where it has become established and redistributing them to other parts of the state. State Entomologist Joe Francka says, "We are concentrating our efforts in those counties where musk thistle infestations are the heaviest." It was estimated over 500,000 acres of pastureland were infested in 1980. Northwest Missouri is the hardest hit, with Atchison, Andrew, Daviess, Clay and Ray counties having the heaviest concentration of thistles. Farther south, Cass, Polk, Green and Webster counties also are at the top of the list.

The musk thistle weevil, also a European native, was first brought to Canada in 1968 after considerable studies to insure the weevil would not attack beneficial crops. In 1975, Ben Puttler, with the USDA Bio-

logical Control of Insects Laboratory, Columbia, released weevils in a heavily infested area in Webster County. The weevil multiplied and spread over a large area where its effect now is being seen with reduction on thistle populations of over 90%. The weevil lays its eggs on the flower head. As the eggs hatch, the small grubs (larvae) bore into the seedhead. The larvae feed on the developing seeds within the flowerhead destroying them in the process. When weevil populations are heavy most thistle plants fail to produce seed, where before one plant would produce an average of 10,000 viable seeds.

Francka says, "We try to encourage farmers to use chemical control on isolated infestations that have not become widespread. However, once it becomes established over a larger area, complete eradication is not possible and biological control using this weevil is the only practical long term solution."

More than 13,000 weevils were redistributed during May to 26 new areas where they did not occur and musk thistle was well established.

"It is long term project," says Francka, "but some farmers already are benefiting from our prior releases. We hope many more will benefit in the future."

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HAVING A BLAST The 1/4 scale replica of the 42-pounder Civil War signaled the opening and closing of the Fourth of July activities. Binglein, who owns the cannon, used 800 grains of black powder to fire. July pictures are on inside pages.

## Musk Thistle Remains On Board's Agenda; Budgets

Weed control was on the agenda again for Tuesday's meeting of the Board of Supervisors. County Attorney Greg Jensen submitted a letter to the board which was read during the meeting which recognized that the musk thistle weevil was not adequately controlling the area's musk thistle. In a related topic, Weed Control Chairman Gerald Thompson resigned from his position. In his letter of resignation, read during the meeting, Thompson noted that since the weevil is not controlling the musk thistle, his duties as weed control chairman are no longer necessary. His resignation will be effective August 1.

BC/BS Policy Change A revision was made by the county employees' personnel policy. Originally, when a new county employee was hired, Blue Cross/Blue Shield would not pay for his or her premiums during the three-month probationary

period, however, the employee could have those premiums deducted from their pay check. Blue Cross/Blue Shield will no longer honor that policy. The board acted on striking that section out of the personnel policy.

Workshop This Friday The board announced that a Revenue Sharing Workshop will be held in Norfolk on Friday, July 13. The workshop will be beneficial to county tax officials, Superintendent and Revised County Agent Budgets. The board examined the superintendent budget and the revised county agent budget and will have to give tentative approval before the budgets go to the accountant.

During budget discussion following the lunch break, it was reported that the Four Valley Reclamation District is asking for a levy of seven cents per \$100 of actual valuation upon tangible property within Basin boundaries.

br. Well built attached g Two bedr. e have i nge. ntable for Council Tow Land. Peterson ge Robertso e Peterson, Associate

AU

July 18 - B July 19 - Y August 4-5 August 18 - Comstock

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