

# NEBRASKA POTATO EYES

Technical News Reports for the Nebraska Potato Industry

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Extension Potato Specialist

Western Potatoes Inc. under the leadership of Dale Moore has been chosen Frito Lay's "Seed Grower of the Year" for the second year in a row. Let's all congratulate them on their success.

On a sad note, Pat Chrisman died recently, this came unexpectedly and we mourn his loss. See this page.

Potato conferences were held around the country. See page 2 for highlights taken from the proceedings. Included are Wisconsin's, Washington's and Idaho's potato conferences given last January and February. The proceedings of these are available at the Panhandle Research and Extension Center.

**Mexico imposes quotas and maintains tariffs on potatoes over the next 10 years.  
Mexico closes border on seed & fresh potatoes... See Free Trade On Page 2**

The Nebraska-released potato cultivar 'Red Cloud' is highlighted in this issue's 'cultivars' on page 5. The North Central Region Variety Trials of 1991 are summarized on page 4.

The next Nebraska Potato Focus (1992) is planned for December 16<sup>th</sup> & 17<sup>th</sup>. This conference will focus on insects. Notices will be sent out later.

**The tentative agenda is:**

**Potato Psyllid** — Witney Cranshaw  
Colorado State University

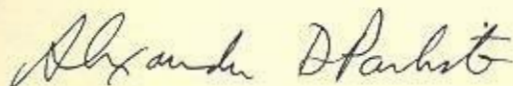
**Leafhopper** — Edward Radcliffe  
University of Minnesota

**Aphids** — Mark Whalen  
Michigan State University

**Soil Ecology** — Robert Wright  
University of Nebraska

**Biocontrol** — Gary Hein  
University of Nebraska

**Insecticide Review** — Alex Pavlista  
University of Nebraska



## PASSAGES

**Nebraska Potato Industry Mourns a Loss**  
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Pat Chrisman, 65, died on June 25 enroute to a Scottsbluff hospital. Born in Hyannis, NE, Pat moved to western Nebraska in 1957 where he farmed, raised cattle and custom-harvested potatoes. In 1966, he and his wife, Faye, moved to Melbeta. Chimney Rock Potatoes was formed by Pat and his son, Mike, in 1972. Mike Chrisman will continue the family business growing potatoes and other vegetables.

We wish to extend our sorrow over Pat's sudden death. Pat is survived by his wife, four sons — Mike (McGrew), Bert (Godeffroy, NY), Mark (Scottsbluff), and Dick (McGrew), two daughters — Lill Butts (Minatare) and Susie Thiel (McGrew), his stepmother — Evelyn Chrisman (Gering), 16 grandchildren, and one great grandchild.

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# Free Trade Agreement Preview

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On August 12, 1992, a NAFTA (North American Free Trade Agreement) agreement was announced in Washington, D.C. The following are highlights based on preliminary information obtained from reliable sources.

**Seed Potatoes** — The U.S. tariff (.6%) and the Mexican tariff (10%) would go to zero. Currently, however, phytosanitary concerns preclude seed potatoes from moving either way. In 1991, the U.S. shipped about 9,260 tons (185,200 cwt) of seed potatoes to Mexico while no seed potatoes were shipped from Mexico to the U.S.

**Tablestock Potatoes** — The U.S. tariff (1%) would be phased to 0 over 5 years. The Mexican tariff (10%) would go to 0 immediately for the first 16,500 tons. This duty-free quota would be increased by 3% per year to accommodate growth. The above-quota tonnage would be subject to a tariffed rate of 272%. The 272% tariff is the rate calculated based on Mexico's removal of its licensing scheme. The 272% tariff would be reduced by 24% over the first six years and then reduced to zero over the next four years in equal increments. In 1991, the U.S. shipped 12,000 tons to Mexico. Mexico had no shipments into the U.S.

**Potato Chips** — The U.S. tariff (10%) would be bound at the current applied rate of zero. The Mexican tariff (20%) would be reduced over 10 years with a safeguard, tariff-rate quota. The first 5,950 tons or quota would enter at the preferred NAFTA rate, i.e., 20% reduced over 10 years. The quota would increase by 3% compounded annually. Chips shipped over the quota would face the 20% Mexican tariff for the 10 year phase-out period. The U.S. in 1991 shipped 121 tons of chips to Mexico. Mexican exports of chips to the United States reached 910 tons.

**French Fries** — The U.S. tariff (10%) would be reduced to 0 over 5 years. The Mexican tariff (20%) would be reduced over 10 years with a safeguard, tariff-rate quota. The first 3,400 tons or quota would enter at the preferred NAFTA rate, i.e., 20% reduced over 10 years. The quota could increase by 3% compounded annually. Fries shipped to Mexico above the quota would face the 20% Mexican tariff over the entire 10 year phase-out period. In 1991, the U.S. shipped 3,600 tons of fries to Mexico while no fries were shipped to the U.S. by Mexico.

**The Next Steps** — 1. Further legal drafting and review are currently proceeding.

2. Once the treaty is edited, the President must notify the Congress of his intent at least 90 days prior to signing the agreement. The legal text is not planned for submission to Congress until September 8. The 90-calendar-day period would bring the President's signature to December.

3. After the agreement is signed, legislature will need to be prepared to implement the agreement. The Congress must then vote on the implementing legislature within 90 "session" days of Congress. This works out to at least 8 months unless Congress does not use all of its allotted time.

On June 8, 1992, the National Potato Council had urged that tariffs on potatoes and its products, except potato chips, be reduced to zero immediately. This urging was due to the planned replacing of Mexico's licensing requirement with 272% tariff on tablestock above a specified quota. The quota amount will be phased out over a 10-year period. Also, Mexico has decided to close its borders to seed and tablestock potatoes allegedly due to phytosanitary concerns some of which are not considered legitimate by the USDA.

## Illegal Pesticides in Foods

—1990, FDA—

### *Domestic Supplies*

1.1% or 95 out of 8,879 samples

### *Imported Supplies*

4.3% or 445 out of 10,267 samples

# Potato Schools

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Potato schools were held across Wisconsin, Washington and Idaho. The following are some research highlights relevant to potato production in Nebraska, Wyoming and northern Colorado. These were taken from the Proceedings which are available in the D.A. Murphy Library at the Panhandle Research and Extension Center, Scottsbluff, NE.

## I. Wisconsin

Petiole responses of several cultivars at Hancock, WI from 1989 to 1991 were reported. A summary on Atlantic and Norkotah Russet is given in Table 1. Variations in the readings were high for these two cultivars over the 3-year period. The most consistent economic rate for nitrogen application for these cultivars was 120 lb/a. Critical values for petiole nitrate levels are listed as:

< 1.25% = deficient

1.25% to 1.65% = low

> 1.65% = sufficient

Some varietal differences have been noted in several tests in several states. Studies on petiole nitrate levels are being done in CA, ID, ME, MI, and WI. (Keith Kelling et al).

Table 1. Yield, nitrogen rate and petiole nitrate at about 50 days after emergence (DAE) for Atlantic and Norkotah R. grown at Hancock, WI, means of 1989, 1990 and 1991.

Cultivar	N rate #/a	Yield cwt/a	Petiole nitrate (%) about 50 DAE
Atlantic	0	342	0.1
	40	396	0.5
	80	423	1.1
	120	468	1.6
	160	461	1.6
	200	459	2.2
Norkotah R.	0	289	0.3
	40	383	0.7
	80	385	1.4
	120	407	1.9
	160	412	2.1
	200	425	2.6

The effects of pre-cutting and fungicide treatments on 'Atlantic' potatoes were presented from the tests at Hancock and Antigo, WI in 1991. Table 2 gives selected highlights from these data. Note, 'Atlantic' seedpieces gave higher yields and better stands when pre-cut and allowed to suberize for at least three days. Seedpieces treated with TOPS 2.5D and stored three days before

planting gave higher yields than untreated, stored seedpieces. TOPS 2.5D or 5.0D applied to fresh cut and planted seed gave lower yields and stand than for untreated fresh-cut seedpieces. (Walter Stevenson)

Table 2. Yield and percent stand of pre-cut, untreated 'Atlantic' seedpieces stored at 50-60° F and 90-95% RH for variable times to allow wound healing.

Days after cutting before planting	Yield cwt/a	Percent stand
<b>a. Hancock, WI, 1991 —</b>		
0	312	66
1	283	66
3	339	85*
3(+tops 2.5D)	382*	87*
8	373*	83*
10	388*	94*
<b>b. Antigo, WI, 1991 —</b>		
0	326	69
0(+TOPS 2.5D)	245	52
0(+TOPS 5.0D)	310	52
4	396*	88*
6	410*	88*
8	334	83*
10	365	73

\*indicates significant increase over fresh-cut seedpieces (0 day).

Soil-dissipation rates of metribuzin (Sencor, Lexone), metolachlor (Dual) and pendimethalin (Prowl) all applied preemergence were determined between 1987 to 1990. These herbicides dissipate to an inactive level between seven to nine weeks after application in WI. Canopy development is near maximum at 6 weeks after emergence for 'Russet Burbank' and 'Superior' cultivars. This would correspond to about the time these herbicides are dissipated below their active level. (Larry Binning et al)

## II. Washington

A number of universal trends and generalities on potato planter performance was described.

1. Blocky seed works best. — Seedpiece length to width to height dimension should be in a ratio of 1:1:1 due to similar rolling characteristics.
2. Single crops are better. — Note, lower planter speed by 0.1 mph.
3. Seedpieces should weigh between 1.5 to 3.0 ounces.
4. Pick length and cup shape must match seedpiece dimensions.
5. With small seedpieces, more doubles are planted; with large seedpieces, there are more skips.

Continued on Page 4

### ➔ Potato Schools From Page 3

6. As seedpiece size increases, the ground speed of planters must decrease to maintain same spacing. This is due to roll characteristics.

7. Shorter seedpiece spacings require slower planter speeds.

8. Seedpieces must freefall into the seed bowl for proper planting. — Overfilling bowls is very common.

9. A high performance level is more difficult with full planters. — Precut seedpieces are more prone to "bridging" than freshcut. (Steve Holland, Pure Gro)

'Shepody', 'Nooksack' and to a lesser extent, 'Ranger Russet' tend to produce tubers 16 oz and over. The plant growth regulator, Gibberellic acid (GA), was tested as a seedpiece dip at concentrations of 0, 5, 1, and 2 ppm to alter the tuber profile to smaller sizes without changing seedpiece spacing.

The effect of GA can be summarized as: 'Shepody' (1989,90,91) — No significant effect on total, US#1 (4-16 oz tubers) and US#2 yields. Tuber profile was shifted to smaller seed (Table 3a).

'Ranger Russet' (1989,90,91) — Yield of US#1 was decreased; total yield was increased by 0.5 ppm GA and decreased by 2.0 ppm. The tuber profile was shifted too dramatically to smaller sizes to suggest GA use on this variety (Table 3b).

'Nooksack' (1991) — Total yields were increased. Tuber profile was shifted to smaller seed. (Loretta Mikitzel)

**Table 3.** Effect of GA dips on the distribution of the tuber size categories of 'Shepody' and 'Ranger Russet' potatoes.

GA ppm	Size Category (oz)					Total yield -US#2 cwt/a
	<4	4-8	8-12	12-16	>16	
<b>a) Shepody (3 year mean)</b>						
0	6	24	26	18	26	454
0.5	9	27	27	20	17	426
1.0	13	32	27	14	14	426
2.0	13	31	27	16	13	414
<b>b) Ranger R. (3 year mean)</b>						
0	7	33	31	17	12	523
0.5	13	38	24	14	11	579
1.0	15	39	22	13	11	525
2.0	16	40	26	12	6	472

### III. Idaho

The occurrence of early dying may be significantly affected by the previous cropping history. The build up of *Verticillium dahliae* in the soil on a field continuously cropped with Russet Burbank, a susceptible variety, is shown in Table 4. (Jim Davis)

**Table 4.** Density of *Verticillium dahliae* in soil continuously cropped with Russet Burbank 1977 - 1981.

	1977	1978	1979	1980	1981
Inoculum density (ms/g soil)	140	80	75	170	310

The early russets Frontier, HiLite and Norkotah show susceptibility to early dying and early blight.

Frontier R. is sensitive to postemergent Prowl injury. Skin set may be slow; therefore, it is best to cut back nitrogen during the latter part of the season and to avoid overwatering. This variety is resistant to internal problems, blackspot and rot, but can show leafroll necrosis.

HiLite R. is very susceptible to early dying and early blight. It does not process well out of storage.

Norkotah R. is very susceptible to early dying, and PVY has been a problem. It does not process well out of storage, has a medium dormancy and is good for the fresh market. Norkotah is resistant to internal defects. It has very low solids and a strong off-flavor when stored.

Ranger R. is more tolerant to field diseases than R. Burbank, particularly early dying and early blight, but is more susceptible to common scab. It has less internal defects. Plants should not be dried down when green or else stem end discoloration and more blackspot will develop. Ranger has a medium dormancy.

Shepody, a long white variety, is sensitive to postemergence application of Sencor/Lexone also to common scab. Otherwise, there are no particular problems in the field. It has a medium dormancy and low solids. PVY has been a problem.

## Accidental Deaths in Nebraska in 1989

(Source Mark Miller, Nebraska Dept. of Health)

	# Of Deaths	% of total
Motor Vehicle	302	55
Falling	103	19
Suffocation	25	4
Drowning	21	4
Surgery	20	4
Drugs	17	3
Fire	14	3
Gas/Vapors*	12	2
Machinery	12	2
Air Transport	11	2
Firearms	11	2
<b>TOTAL</b>	<b>548</b>	

\* primarily CO<sub>2</sub> and CO gases, no deaths due to pesticides or poisonings by solids or liquids.

# North Central Regional Potato Variety Trials

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The North Central Regional Potato Variety Trial was conducted in 10 states and three provinces in 1991. These were ID, IA, MI, MN, NE, NJ, ND, OH, SD, WI, Alberta, Manitoba, and Ontario. Soil type ranged from clay loam to sand; light sandy soil predominates. Irrigation was used at several locations. The northern states and provinces received normal or above normal rain.

**Maturity:** Late maturing entries were ND1871-3R, Red Pontiac and Wisc. 856. R. Burbank was the latest. No variety was as early as Norland.

**Yield:** The highest yield was obtained from Red Pontiac. This is consistent over the past 40 years. Other high yielding varieties were MN12567, LA12-59, ND1538-1 Russ, Wisc 856, and ND1871-3R. The percent of yield due to tubers over 2 inch was between 80 and 89% except for R. Burbank at 66%.

**Solids and Chip Color:** The highest solids were obtained from Wisc 870 and Wisc 856. The lowest were from Red Norland and Red Pontiac. The best chippers based on color were the three Wisconsin varieties and Mich 401-1Y.

**Tuber Defects:** Scab was most prevalent in IA, ID and MN. ND1538-1 Russ showed the least scab; the varieties with the most scab were LA12-59, MS401-1Y and Red Pontiac. Growth cracks were evident in LA12-59, ND1538-1 Russ and MN12966. R. Burbank had the most off-type/second growth, and Red Pontiac and ND1538-1 were also noteworthy as having these

defects. LA12-59 had the most tuber rot. Hollow heart was evident in Norgold R., MS402-8, MS401-1Y, and Wisc 870. Heat necrosis was a major defect in Wisc 877 and vascular discoloration was noteworthy in Norchip.

**Overall Merit:** The top entries were Wisc 870 (white), ND1538-1 Russ (russet), ND1871-3R (red), Wisc 856 (white), MS401-1Y (white), and LA12-59 (red). Four varieties will be retested in 1992; these are LA12-59, ND1871-3R, W870, and W877.

## Overall merit of top 1991 varieties in 1989, 1990 and 1991.

	Total points		
	1989	1990	1991
1. Wisc 870*	0	39	34
2. ND1538-1Russ*	17	26	33
3. ND1871-3R	0	0	21
3. W856	0	27	21
4. MS401-1Y	0	0	19
5. LA12-59*	NT	32	16

NT = Not tested

\*rated high in Nebraska

## North Central Regional Trials Results, 1991

Cultivar	Total yield cwt/a Defects	Solids % Defects	% with Scab	% with External	% with Internal
R. Burbank	321	19.1	1.3	29.0	12.7
Norgold R.	289	17.7	6.6	17.1	7.8
ND1538-1 Russ	349	18.1	3.8	16.7	3.2
Norland	277	16.5	5.8	13.3	6.1
Red Pontiac	420	16.6	12.1	20.4	8.6
LA12-59	350	18.7	15.6	22.4	5.8
MN12966	281	18.2	7.9	15.5	5.6
MN13035	316	17.3	7.7	14.0	3.8
ND1871-3R	335	17.2	11.5	16.5	7.8
Norchip	319	19.9	5.3	17.8	17.5
MN12567	363	19.0	9.0	16.0	7.8
MS401-1Y	314	21.1	18.0	18.7	5.3
MS402-8	188	19.4	2.5	10.6	10.3
W856	319	19.7	6.6	12.1	16.0
W870	338	22.8	9.1	13.4	13.3
W877	272	22.8	8.7	11.2	35.0

Means of 13 locations.

# CULTIVARS

## RED CLOUD

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The release of RED CLOUD was announced in 1992 by the University of Nebraska-Lincoln and the Panhandle Research and Extension Center at Scottsbluff. It is a red-skinned, white-flesh, round potato targeted for the tablestock market for boiling, mashing and baking. Its dark red skin holds color very well in storage making it an attractive potato and excellent for salads and side dishes. Its relatively high specific gravity gives the flesh a mealy texture and makes it excellent for baking.

RED CLOUD (NE A143,70-2) was selected in 1970 by Dr. Robert O'Keefe. Early testing was conducted in Nebraska and Colorado (1977-82), in Arizona (1978-82), in Texas (1982-83), and in the North Central States Trial of 1982. From 1989 to 1991, it was retested in western Nebraska. It has a mid-season maturity about that of 'Red LaSoda' and earlier than 'Red Pontiac'. Its tuber's long dormancy-period requires special storage handling for seed, RED CLOUD is tolerant to many diseases but will produce offtypes.

### Summary of Properties:

Purpose — fresh market (boiled, mashed, baked)

Maturity — mid season

Vine — medium size

Leaves — medium size, dark green

Flowers — dark violet to purple

Eyes — shallow

Tubers — round to slightly oval, dark red-skin

Dormancy — long, requiring special handling for seed

Specific Gravity — higher than other red cultivars

Yields — equal or higher than Red Norland and Dark Red Norland

External Defects — moderate amount of off-types

Internal Defects — less than Red LaSoda, Dark Red Norland and Red Pontiac

Diseases — tolerant to highly tolerant to scab; tolerant to early dying, fusarium wilt and early blight

Other — less vascular discoloration and hollow-heart than Red LaSoda and Red Norland; tolerant to heat stress

Tuber Yields and Specific Gravity in Nebraska-Colorado Trials, 1977-82

	Total cwt/a	US 1 cwt/a	Specific Gravity
RED CLOUD	301	195	1.072
RED NORLAND	288	202	1.063

Combined means of 7 trials

Tuber Yields and Quality in Nebraska trials 1989-91

	> 2 In cwt/a	Specific Gravity	% Internal Defects
RED CLOUD	327	1.078	4
DARK RED NORLAND	289	1.066	8
RED LASODA	445	1.071	7

Combined means of 5 trials

Tuber Yields and Quality in NCS Trial, 1982

	Total cwt/a	US 1 cwt/a	Specific Gravity
RED CLOUD	263	222	1.073
RED NORLAND	262	226	1.067
RED PONTIAC	420	353	1/068

	%Tubers With Internal Defects	%Tubers With External Defects	%Tubers With Hollow Heart
RED CLOUD	20	7	0.2
RED NORLAND	22	11	2.0
RED PONTIAC	29	18	3.5

Combined means of 14 trials

## Fumigation Safety Practice Clarification

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In the last issue, five safety practices were listed. These pertained to the use of Methyl Bromide and Chloropicrin. Metam-Sodium is less toxic and, therefore, its use has less requirements. It is always a safe practice to fumigate with someone and to post signs during fumigation. However, for Metam-Sodium, a half-face respirator could be used instead of a self-contained breathing apparatus. Re-entry timing can not be determined via air-testing, but, if odor is present, use the respirator. There is no need to notify police and fire stations when using Metam-Sodium. Always refer to the fumigant's label for specific requirements before use.

## New Herbicide Carryover into Potatoes

Gail Wicks

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Certain herbicides can persist in the soil long enough that rotational crops may be injured. This is called herbicide carryover. Crop rotations are planned and herbicides selected years in advance in order to take advantage of the benefits of crop rotations and use of different herbicides to control specific weed problems.

The potential for herbicide carryover increases as one goes westward in Nebraska. Lower rainfall, coarser textured soils, lower soil organic matter, and higher pH occurs as one moves westward in the state. These factors increase carryover potential. Herbicide carryover potential with several herbicides is greater on eroded soils and soils with pH greater than 6.8. Carryover is also a function of application accuracy. Carryover is more apparent in headlands and other areas where sprayer overlap is common. Herbicide applications made late in the season have greater potential compared to earlier applications.

Always be cautious in using new herbicides. It takes a few years before a pattern is developed on carryover potential. Scepter carried over longer than American Cyanamid Co. originally thought. Now its use is limited to the eastern edge of Nebraska. Scepter's rotational crop restriction for all crops except corn and soybeans is 18 months.

Most companies give rotation intervals and restrictions on labels. The following lists time intervals on recropping restrictions applied to potatoes in Nebraska. Some labels suggest that a plant bioassay should be conducted in addition to following the number of months crop planting needs to be delayed.

Potato planting intervals in months after previous herbicide used:

### I. Corn to Potato

Cycle = 9; Accent = 10-18; Atrazine, Beacon, Laddok, Marksman = 18; Bullet, Lariat = 24 months.

### II. Winter Wheat to Potato

Extra = 2, 2,4-D = 3, Banvel, Buctril = 12, Curtail = 18; Tordon\* = 36 months. \*Test with bioassay.

### III. Alfalfa to Potato

Lexone/Sencor = 4; Karmex, Sinbar, Velpar = 24 months.

### IV. Sugarbeet to Potato

Nortron = 12 months; Stinger = no information

### V. Soybean to Potato

Pinnacle = 1.5; Assure, Salute = 4, Commence, Command = 9; Classic\* = 9-15; New Lorox Plus\*, Preview\* = 10; Canopy\*, Gemini\*, Pursuit, Pursuit Plus = 18 months.

\*Test with bioassay the season before planting.

## Potato Board Goes International

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The USDA allocated \$5.6 million to the Board's 1992 Export Program. This was the 12th highest allocation in a group of 61 and represents a \$1.67 million increase over 1991. Promotional activities were approved for Australia, Hong Kong, Indonesia, Japan, Malaysia, Singapore, South Korea, Taiwan, Thailand, the Philippines, and the United Arab Emirates.

Due to the cultural differences between countries in the Pacific Rim, the Board tailors its promotional program to each. In Japan, U.S. fries are widely accepted and sought. The Board is striving to create a demand for other U.S. Potato products as well as fries. Singapore is one of the few countries in the Pacific Rim whose trade restrictions allow fresh potatoes to be imported. There, consumers are concerned about nutrition. This presents a great opportunity for the Board and it will focus on it. In Singapore, a large number of people buy food from small vegetable stalls at the "wet" markets. At many of these markets, potatoes are stored and handled improperly. This year, the Board will develop and distribute information to educate produce marketers regarding the proper handling and storage of fresh potatoes. Most Indonesians know very little about potatoes and still eat rice with every meal. The Board will focus on joint promotions with restaurants, supermarkets, convenience stores, and hotels to familiarize the Indonesian public with the high quality and good taste of U.S. potatoes. All of the countries suffer from lack of awareness of U.S. potatoes, but to different degrees. Advertising, public relations, and point promotion activities are custom designed.

## National Rankings in Potato Production for 1987

Nebraska — 16

Box Butte County — 50

Banner County — 80

(source 1987 Census of Agriculture)

# Nebraska Administration Of Federal Pesticide Regulations

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EPA regulates the sale and use of pesticides in the U.S. under FIFRA, the Federal Insecticide, Fungicide & Rodenticide Act. EPA establishes label restrictions on pesticide use. Applicators using restricted use pesticides must be trained and certified. EPA monitors pesticide use to insure use according to label directions and prosecutes misuse.

While EPA retains responsibility for pesticide registration, EPA delegates to states the administration of the FIFRA user certification and enforcement program. All states except Nebraska administer FIFRA for EPA. User certification of Nebraska pesticide applicators using restricted use pesticides is performed by the UNL Extension Service under a contract with EPA. EPA enforces pesticide use restrictions. Nebraska's refusal to administer the FIFRA user certification and enforcement program may within 2-3 years lead to restricted use pesticides found in groundwater to be unavailable for use within the state, as part of EPA's implementing its proposed "Pesticides in Groundwater Strategy".

Implementing EPA's pesticides strategy in Nebraska would require Nebraska to assume FIFRA administration. To qualify for FIFRA program assumption, Nebraska would have to establish a user

certification and enforcement program. Assuming state administration of FIFRA, Nebraska would require an effective program for monitoring pesticide use and prosecution of pesticide misapplication. Nebraska pesticide statutes would have to be significantly broadened to assume FIFRA administration. Such changes have been proposed in the Nebraska Unicameral for several years but have been opposed by Nebraska pesticide dealers. This opposition reflects dealer concern that the program would be financed by higher registration and other pesticide fees.

A major issue is program funding. In Iowa, fertilizer is taxed \$0.75/ton (82% actual nitrogen solution) and pesticides are subject to registration fees and sales taxes of three-tenths of one percent. Similar taxes probably need to be considered to fund groundwater quality protection programs in Nebraska.

Conclusion. The state of Nebraska can choose not to adopt FIFRA administration and wait to see whether EPA will in fact ban pesticides contaminating groundwater in Nebraska. If EPA does so, atrazine would probably be the first banned. This would require many Nebraska farmers to use a different pesticide and/or other pest control practices. The larger issue is whether the citizens of Nebraska want to continue the state's environmental policy of ignoring pesticide use (and misuse) as a groundwater quality concern.

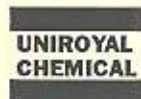
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