

APR 28 1999

MEMORANDUM

Subject: Addendum: Re-review of Request by North Dakota (99ND0017) and Minnesota (99-MN-21) for the use of sulfentrazone (AI: 129081) on Sunflowers to control kochia. [Barcodes for ND: D253727, D253729 and for MN: D254420, D254421]

From: James G. Saulmon
Herbicide and Insecticide Branch
Biological and Economic Analysis Division (7503C)

David Widawsky
Economic Analysis Branch
Biological and Economic Analysis Division (7503C)

To: Jackie Mosby-Gwaltney/Robert Forrest
Registration Support Branch
Registration Division (7505C)

We have re-reviewed the first requests by North Dakota and Minnesota for emergency exemptions to use sulfentrazone on sunflower to control kochia. In addition to our review for 99-ND-17 and 99-MN-21, this re-review is based on the following two letters: (1) April 15, 1999 letter to S. Meredith Laws, Team Leader, Emergency Response Team, USEPA from Larry Kleingartner, Executive Director, National Sunflower Association, Bismark, ND and (2) April 14, 1999 letter to Meredith Laws, Team Leader, Emergency Response Team, USEPA from Roger Johnson, Commissioner of Agriculture, North Dakota.

Sunflower growers in Western North Dakota face serious problems in the absence of an herbicide such as sulfentrazone. However, we still find their situation to be routine.

CONCURRENCES

SYMBOL	7503C	7505C	BEAD	7503C	7503C			
SURNAME	Saulmon	Widawsky	R. Davis	Widawsky	G. J. J.			
DATE	4/28/99	4/28/99	4/29/99	4/30/99	5/1/99			

①

Biological Aspects

Biological aspects of the ND response:

A. NSA letter and its quotes from growers:

- 1) These all indicated that growers faced real weed challenges, and were adopting various strategies to cope with them. None said they had been forced to abandon sunflowers as a no-till crop.
- 2) The only non-routine aspect is the emergence of ALS resistant kochia, which means that populations may be increasing due to lack of control in other crops.
- 3) No data were included in the letter to allow quantitative conclusions to be reached.

B. Roger Johnson letter:

- 1) Despite the existence of resistant kochia populations, sunflower growers had a bumper crop last year, under favorable rainfall conditions and the ability to cultivate. It is when rainfall is limiting and cultivation is not an option that kochia control by pendimethalin is erratic.
- 2) Sunflowers are a more valuable crop to dryland growers because grain profits are always low and rotation is needed for disease control. Some dryland growers must be managing to profit from sunflowers because acreage has expanded. BEAD agrees that sulfentrazone would be very helpful, but notes that a decision to move sunflower acres from wetter to dryer locations is not the kind of non-routine event that Sec. 18 is designed to cover.
- 3) BEAD stands corrected on the point that no-till farming is mandatory in the dry areas, not optional to qualify for a subsidy. BEAD agrees that the use of mechanical incorporation for pendimethalin (a DNA herbicide) is not possible under no-till conditions. BEAD agrees that a profitable rotational crop in place of wheat & barley is necessary to avoid grain diseases, and to improve meager profits.
- 4) This paragraph confirms that kochia is a more competitive weed under dry conditions than moist conditions, and that timely rainfall is needed for a good yield.

Conclusions:

A. Without sulfentrazone, ND sunflower growers can produce adequate yields in the moister (eastern) part of the state because: 1) Cultivation can be used, 2) pendimethalin can be mechanically incorporated, or activation by rainfall more often occurs, 3) sunflowers are more competitive with kochia under moist conditions.

B. Dryland growers of sunflowers must use no-till cropping practices, which makes weed control less consistent because activation depends more heavily on timely rainfall, and because sunflowers are less competitive under dryland conditions.

C. Some dryland sunflower growers succeed in producing a crop despite these difficulties.

The fact that some growers may be less successful does not constitute a non-routine situation.

D. The problems besetting sunflower growers in dry areas are not non-routine, though some may have an urgent need of a rotational crop for small grains.

E. No doubt sulfentrazone would remove much of the weed risk to sunflower yields, but BEAD still finds that biologically the most non-routine aspect of this situation is the availability of a new answer to an old problem.

Economic Aspects

In formulating a response to EPA's decision on the Section 18 exemption request for sulfentrazone on sunflowers, the North Dakota Commissioner of Agriculture made several noteworthy summary points:

1. **There is an emergency situation regarding herbicide resistant weeds.** In his response, the commissioner notes that "kochia has been a consistent weed pest year after year and it has been an emergency every year." While the commissioner describes in detail the impact of kochia on sunflower as a chronic problem, the year-in and year-out nature of the condition would not appear to qualify as an emergency for the purposes of a Section 18 exemption. The role of ALS resistant kochia apparently "has added to the existing emergency", rather than causing it. Although there are reasons why ND farmers have reasons to be gravely concerned about weed problems in sunflower; the commissioner's response clearly states that kochia has long been a problem, through good years and bad. Therefore, as noted above, a serious concern arises whether the situation is non-routine and a candidate for a Section 18 exemption.

2. **MAINTAINING SUNFLOWER ACREAGE MEANS A SHIFT OF ACREAGE FROM EASTERN TO CENTRAL AND WESTERN NORTH DAKOTA WHERE NO-TILL IS NECESSARY** [full capitalization maintained from response]. The response describes the underlying agronomic, economic, and regulatory environment that is leading to a shift in sunflower production from Eastern North Dakota to areas in the western part of the state. Farmers in western portions of North Dakota want to be able to adopt no-till sunflower production as part of their farming system. Western North Dakota is more arid and the soil more fragile than areas of Eastern North Dakota (where sunflower has been profitably grown for many years), and farmers cannot grow soybeans under these conditions. Unfortunately, this evidence argues strongly against a Section 18 exemption because it suggests that the exemption is being used to support a shift or enhancement in cropping systems, which does not seem to be condition normally considered urgent for the purpose of a Section 18 exemption.

3. **Sunflower is an important rotation crop that adds value to ND agriculture.** The evidence of revenue or profit enhancement is a recurring problem for ND's request. The response states that "with a lack of no-till weed management and *shifting sunflower acreage to no-till areas* [italics added], this acreage would suffer a loss in profitability." If sunflower production in no-till areas has been plagued by kochia for many years, and a crisis exists because sunflower production is expanding in areas with traditionally low profits, then there certainly appears to be a substantial problem, but we have grave reservations whether a Section 18 exemption is the solution. Moreover, the commissioner adds "it is important for you to know that average sunflower prices to date in 1999 are averaging about \$7.00/cwt for oilseed sunflower, which is 40% lower than the previous five years." The low prices for sunflower would seem to result from North Dakota's success in growing sunflowers. North Dakota, which produced 54% of the U.S. oilseed sunflower in 1998, produced 66% more last year than in 1997. Sadly, the economics of excess supply and low prices in agricultural production often punish farmers this year for producing high yields last year. BEAD has not supported granting Section 18 exemptions for

pesticides to alleviate income problems that result from high yields and low prices. Similarly, BEAD has not supported Section 18 exemptions to alleviate the costs associated with under-utilization of oilseed crushing capacity, another problem in the sunflower industry pointed out by the commissioner.

Summary: The ND response describes in detail the constraints faced by farmers in Western North Dakota who want to adopt no-till production of sunflowers. Much of the shift in production location has occurred because sunflowers cannot compete with soybeans in the eastern parts of the state where cultivation and currently-registered herbicides provide reasonable kochia control. While there may be pressing economic constraints from low prices, under-utilization of sunflower crushing capacity, and profitability concerns in no-till areas, these problems are not a result of an emergency, non-routine condition. Although ND sunflower producers appear to need some sort of assistance, BEAD has serious reservations about whether a Section 18 exemption for sulfentrazone is the appropriate mechanism for delivering such assistance.