



Florida Department of Agriculture
and Consumer Services
TERRY L. RHODES,
COMMISSIONER



Progress Report

Operation Cleansweep

FY 2000-2001

Collection of Canceled, Suspended, and Unusable Pesticides

March 30, 2001

A Cooperative Project involving:

Florida Department of Agriculture and Consumer Services
Florida Department of Environmental Protection
Florida Department of Community Affairs
Florida Department of Transportation
Central Florida Regional Planning Council
County Extension Services and Solid Waste Departments of:

- **DeSoto County**
- **Hardee County**
- **Highlands County**
- **Hillsborough County**
- **Lake County**
- **Manatee County**
- **Okeechobee County**
- **Polk County**
- **St. Lucie County**
- **Volusia County**

**University of Florida Institute of Food and
Agricultural Sciences**
Florida Fertilizer and Agrichemical Association
Florida Farm Bureau Federation
Florida Fruit and Vegetable Association
Florida Nurseryman and Growers Association
Florida Pest Control Association
Certified Pest Control Operators
Florida Tomato Committee
Florida Turf Grass Association
Florida Citrus Mutual
Highlands County Citrus Growers Association
Indian River Citrus League

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Introduction

Pesticides that can no longer be used as intended must be disposed of properly to prevent pollution of soil and water resources and unacceptable exposures to humans and wildlife. Pesticides become unusable as a result of regulatory action (cancellation or suspension of registered uses), or as a result of impairment of the product itself while in storage - such as expired shelf life, crystallization of a liquid in cold temperatures, or solidification of a dust formulation. Pesticide end users may also no longer have a use for the pesticide, even if it is in usable condition.

Pesticide users face difficult choices when dealing with unusable products - proper disposal may involve high costs or difficult regulatory requirements. When faced with an amount of unusable product, the easiest solution is usually to keep it in storage. Long term storage, however, presents a risk also. Containers leak, break or otherwise degrade. Property changes hands, and stored products may be acquired by persons who don't know what they are or how to handle them. Exposures to employees, contact with surrounding communities, and releases to the environment are other potential hazards associated with long term storage.

In order to address this problem in Florida, the Department of Environmental Protection and the Department of Agriculture and Consumer Services have teamed with other state agencies, the University of Florida's Institute of Food and Agricultural Sciences (IFAS) and pesticide user groups to develop and implement "Operation Cleansweep", a program of collection and proper disposal of canceled, suspended, and unusable pesticides (CSUP). Following a 1995 statewide collection of 70,000 pounds of lead arsenate, these agencies and user groups were able to conduct several small scale CSUP collections in a four county pilot project (1996-1997). One additional collection was also held in 1998. These efforts resulted in a collection of a total of 52,000 pounds of CSUP materials from more than 220 participants.

In State Fiscal Year 2000-2001, the Department of Environmental Protection received funding as part of the General Appropriations Act to start an ongoing pesticide collection program. This program, Operation Cleansweep, was funded by an appropriation from the Solid Waste Management Trust Fund at a level of \$300,000 for Fiscal Year 2000-2001.

Program Organization and Implementation

Operation Cleansweep began with the formation of a Steering Committee composed of representatives from the Departments of Agriculture and Consumer Services, Environmental Protection, Transportation, Community Affairs, the Central Florida Regional Planning Council, the Institute of Food and Agricultural Sciences/University of Florida, as well as Florida Fruit and Vegetable Association, Florida Farm Bureau Federation, Florida Fertilizer and Agrichemical Association, Florida Citrus Mutual, Indian River Citrus League, Highlands County Citrus Growers Association, Florida Pest Control Association, Certified Pest Control Operators of

Florida, Florida Turf Grass Association, and Florida Nurserymen & Growers Association. This Steering Committee selected the five (5) county Central Florida Regional Planning Council territory plus two adjacent counties, to be the site of the initial collection. The counties selected were: Hillsborough, Polk, Highlands, Hardee, Okeechobee, St. Lucie, and DeSoto . The collection program was open to pesticide end-users from the agricultural, nursery, golf course and pest control industries. Businesses in these industries in the selected counties could dispose of cancelled, suspended, and otherwise unusable pesticides free of charge through this program. Pesticide distributors and retailers could participate in the program by paying the contract price for CSUP disposal. Planning was devoted to safety issues relating to the transportation and handling of CSUP as well as coordination with local agriculture, solid waste, transportation, and emergency management agencies.

The Department of Environmental Protection (DEP) asked the Department of Agriculture and Consumer Services (DACS) to handle contracting and oversight of the project due to its familiarity with the pesticide end-user community. DACS issued a Request for Proposals for a contractor to collect and properly dispose of the pesticides collected. Contractors were required to bid on the basis of site safety and personal protection, collection, bulk packaging, transport, and disposal of the collected materials. Bids were received from five licensed hazardous waste handlers, and Safety-Kleen, Inc. of Bartow, Florida was selected as the contractor, with a bid of \$ 1.14/pound cost for all collected materials. Bids received ranged up to \$ 1.98 per pound for collected materials.

Under the terms of the contract, Safety-Kleen provided all materials and services for collection, packaging, transport and disposal of the materials collected. The contract also provided for collection of materials at a pesticide end-user location if the containers were deteriorated to the extent that transport was hazardous, or the quantity at the site was large enough (500 pounds or more) to make it more efficient and safer to collect on-site. Materials collected were handled under federal and state hazardous waste regulations applicable to the Universal Waste Rule and, for the purposes of the program, the Department of Environmental Protection became the generator.

Locations for collections were arranged with local county governments, and local Cooperative Extension Service personnel were recruited to notify eligible operations and businesses. Members of the Steering Committee notified their membership as to the availability of the program. DEP also produced a web site that provided information on the program, the schedule of collections, and maps to the collection locations (Web site address: <http://www.dep.state.fl.us/dwm /programs/cleansweep-pesticides>). Mr. Burt Mckee, of the Central Florida Regional Planning Council, conducted informational meetings and training sessions in the selected counties to solicit participation and educate participants on the proper methods of bringing old pesticides safely to the collection site.

At each collection, staff from the Department of Agriculture and Consumer Services and the Department of Environmental Protection, local Regional Planning Council, and county solid waste and cooperative extension service provided oversight and support. Staff of the contractor, Safety-Kleen, Inc., offloaded material brought to the collection site, weighed it, characterized it for disposal purposes in compliance with the requirements of the Universal Waste Rule, and packed the material for transport. As part of the operation, staff of the Department of Agriculture

and Consumer Services distributed literature on safe pesticide handling and storage, and conducted a short interview with the participants to obtain information helpful in planning future Operation Cleansweep collections. Representatives of organizations represented on the Steering Committee also participated and provided assistance at the events.

After collections were held in the first seven counties, enough funds were still available to conduct additional collections. The Steering Committee selected three additional counties adjacent to the original seven - Lake, Volusia, and Manatee. A limited amount of funds remained after these additional three collections were completed, and plans are being made to conduct an additional collection to use these funds. (A Final Report will be issued when the results of this last collection for FY 2000-2001 are known.)

Results

A one-day collection was held in each county. The first seven collections were held in December, 2000 and an additional three collections in February 2001. The dates of each collection, number of participants and pounds collected, are provided in Table 1.

A total of 170,929 pounds of CSUP material was collected from 273 participants in the first series of collections, and 64,715 pounds of CSUP from 101 participants in the second. For the ten collections, the total pounds collected were 235,644 and the total cost was \$ 270,032.67 (which included \$1400.00 for costs for pick-ups of CSUP at end-user locations). Travel expenses, publicity costs, and staff time of participating agencies and pesticide user groups were provided as in-kind contributions to maximize the funds available to pay for CSUP collection. As a result, 100% of the funds available were used to pay for material collection and disposal. A list of the types of materials collected is provided in Table 2.

The results of the survey conducted at the first seven collection sites are summarized in Table 3. Citrus producers comprised the bulk of the participants, followed by nursery operators, vegetable producers, pest control businesses, and golf course operators. The large majority (72%) reported that the materials disposed of had been stored for more than five years. Eighty-two percent of the participants rated the program as "excellent".

Program Benefits

The collection and proper disposal of the canceled, suspended, and unusable pesticides collected in this program provides a benefit both to the pesticide end-users who participated in the program, and the citizens of the state of Florida. Operation Cleansweep is a public/private partnership that benefits program participants by removal of a potentially large financial liability. The benefit to the people of the state is that these products are removed from storage and handled safely, thus preventing these materials from being the source of exposure or environmental contamination.

The cost of collection and removal of these products on an individual or small business can be prohibitive. Typical costs for removal of hazardous wastes from private property include both the costs of hiring a professional, properly licensed firm to assess and characterize the products for disposal and the costs of transport and disposal of the material itself. Costs for professional services are on the order of one to several hundred dollars per hour, depending on the number of

professional staff assigned, with costs for a site clean-up on the order of several thousand to multiple thousands of dollars. Costs for transport and disposal can be estimated from the costs paid by the Department of Environmental Protection for emergency clean-up services. These contract prices are \$ 2.15/mile for transport and \$ 300 per thirty gallon overpack drum. The average amount of CSUP per participant in this program was 630 pounds which would translate to at least three thirty gallon overpack drums. Assuming a trip of 50 miles to the transfer/storage facility, the cost per participant would be \$1,007.50, or at least \$376,805 for the 374 participants, not including the costs for professional services. Assuming a minimum cost of \$1,500 for professional services per participant the cost savings to participating businesses increases by \$561,000 to a total of \$937,805.

By using a bid and contract process, and selecting one contractor to perform a standardized service for multiple participants, and by using in-kind contributions from participating agencies and organizations, Operation Cleansweep was able to save Florida businesses a substantial amount of money. Operation Cleansweep, therefore, provided a financial benefit to participating Florida businesses, while preventing additional costs for environmental clean-ups that could have occurred if these materials were not properly disposed, and by removing stored products that could prove to be potentially dangerous in the event of a spill, fire, hurricane, or other type of release to the environment and surrounding communities.

Future Plans

A funding level of \$300,000 for FY 2001-2002 is in the published Governor's budget recommendation. The agencies and organizations participating in Operation Cleansweep intend to continue to operate the program and provide a valuable service to the citizens of Florida. The long term goal is to bring Operation Cleansweep to every Florida County.

TABLE 1. RESULTS OF 2000/2001 OPERATION CLEANSWEEP¹

County/Date	Quantity Collected (pounds)	Number of Participants	Cost
Hardee County 12/1/00	17,038	19	\$19,423.54
Hillsborough County 12/5/00	33,829	77	\$38,564.49
Polk County 12/7/00	44,044	52	\$50,859.59
Okeechobee County 12/12/00	5,275	14	\$6,013.50
DeSoto County 12/13/00	16,630	25	\$18,957.63
Highlands County 12/8/00	15,085	35	\$17,196.90
St. Lucie County 12/14/00	39,028	51	\$44,491.92
Totals for first seven collections	170,929	273	\$195,507.57
Lake County 2/6/01	27,827	42	\$31,772.78
Manatee County 2/8/01	17,877	38	\$20,679.78
Volusia County 2/15/01	19,011	21	\$22,072.54
Totals for second three collections	64,715	101	\$74,525.10
Grand Totals	235,644	374	\$270,032.67

¹ Costs presented are as invoiced. These may include costs for collections at end-user location. Pounds collected multiplied by cost per pound may not match figures in Table 1 due to rounding.

TABLE 2. EXAMPLES OF PESTICIDE ACTIVE INGREDIENTS COLLECTED
(NOT INCLUSIVE OF ALL PRODUCTS COLLECTED)

<u>Insecticides</u>	<u>Herbicides</u>	<u>Fungicides/Miticides</u>
DDT	2,4-D	zineb
aldrin	trifluralin	mancozeb
chlordane	bromacil	metalaxyl
lindane	glyphosate	phosphoric acid
methomyl	triclopyr	fenbutatin oxide
malathion	paraquat dichloride	copper sulfate
ethion		
fenthion		
imidacloprid		
diazinon		
carbaryl		
		<u>Plant Regulators, Other Pesticides</u>
		ethephon
		metaldehyde
		agromycin sulfate

TABLE 3. OPERATION CLEANSWEEP SURVEY SUMMARY OF 7 COUNTIES

1. Type of operation:
 - 12% Vegetable
 - 18% Nursery
 - 7% Pest Control
 - 48% Citrus
 - 5% Golf Course
 - 10% Other
2. How much material have you brought?
 - 23% 1 to 100 lbs.
 - 32% 101 to 300 lbs.
 - 15% 301 to 500 lbs.
 - 30% 500 lbs. Plus
3. How long have you stored the materials?
 - 1% less than 1 year
 - 6% 2 to less than 3 years
 - 11% 4 to less than 5 years
 - 3% 1 to less than 2 years
 - 7% 3 to less than 4 years
 - 72% 5 years Plus
4. Reason for disposal.
 - 51% unusable (deteriorated product or container)
 - 8% canceled, suspended product
 - 40% no longer needed
 - 2% Other
5. When did you deliver the material to the Operation Cleansweep site?
 - 56% A.M.
 - 44% P.M.
6. Rate the Operation Cleansweep Program.
 - 0% Poor
 - 18% Good
 - 82% Excellent
7. How did you hear about the program?
 - 11% Trade Association
 - 14% Media
 - 41% Word of Mouth