

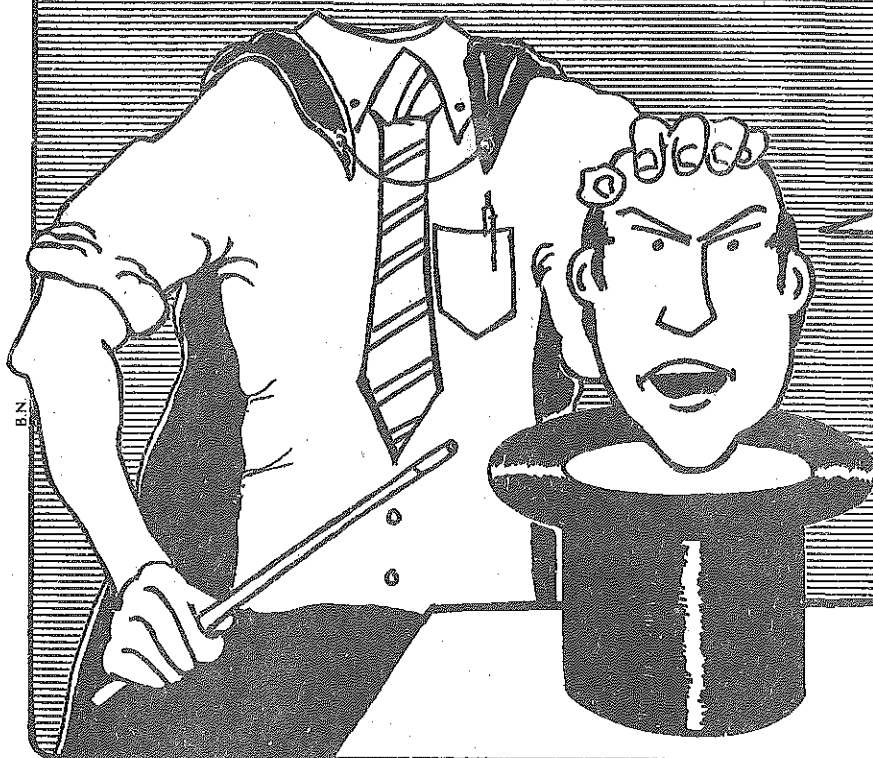
NCAP NEWS

QUARTERLY PUBLICATION OF NORTHWEST COALITION FOR ALTERNATIVES TO PESTICIDES

WINTER 1981

VOLUME 2, NUMBER 3

The Grand Illusion of Independent Scientific Research



Or,
How the
Chemical
Industry got
Hundreds of
Products Registered
with a Biolab's Bag of
Testing Tricks:
Falsification of Data,
Trade Secrets,
Disappearing
Test Animals,
Unrecorded Ill
Effects,
Concealed
Data . . .

PLUS: Spring Spray Alert • Cancellation Hearings Update • Urban Herbicides •
NW Forestry Workers • Small Woodlot Management • Lincoln Co. Initiative
Wrap-Up • GI Guinea Pigs • News From Around • And More!

About NCAP

Northwest Coalition for Alternatives to Pesticides was formed in August, 1977 to coordinate the efforts of groups throughout the Northwest working in opposition to herbicide spraying on forest lands.

At first, our coalition's primary concern was the herbicides 2,4,5-T and Silvex, both of which contain the highly toxic contaminant TCDD (dioxin). The work of our coalition and many other people and groups around the country led to an emergency suspension by the EPA of all pesticide products containing these two chemicals.

NCAP is now an intervenor on behalf of the EPA in the cancellation proceedings against 2,4,5-T and Silvex in Washington, DC. As such, we have sponsored witnesses at the hearings. NCAP's participation assures that residents and workers of the Northwest are represented. The issue seems critical because of its implications for the regulatory process.

Our work in the last year has focused primarily on the assumptions underlying the use of herbicides in reforestation, in both silvicultural and economic terms. In addition, we are investigating new, alternative chemicals, and some of our members have expanded into the area of agricultur-

al chemicals and their alternative, integrated pest management (IPM).

As public concern about chemicals in general has increased, we have found ourselves in the position of a pesticide information referral center. In this capacity, we have found that people are not getting straight answers from local, state and federal agencies on chemicals commonly used in agriculture, forestry, and in urban areas.

NCAP has therefore grown from our original purpose to an organization coordinating both strategies and information exchange throughout the region. We conduct independent research into economics, capital intensive management vs. labor intensive management in forestry, toxicology, human exposure and environmental contamination. Our primary concern remains with exposure to agricultural and forestry workers, and to the residents of rural areas where these chemicals are applied in significant amounts.

Since August, 1977, we have more than doubled in size. Support from people has been increasingly generous, and has contributed in large part to our continuing success in providing services not available through government channels. This publication, together with other NCAP projects, activities, and literature, is designed to bring information about herbicides, other pesticides, and alternatives to the people who need it. We hope it serves this purpose. We welcome feedback as well as requests for information. In addition, we urge you to contact local groups in your area.

MEMBER AND ASSOCIATE MEMBER GROUPS

Oregon

Citizens Against Toxic Sprays, Box 1163, Waldport, OR 97394.
Citizens for Progressive Forestry, c/o Bowsprit Bookshop, Box 212, Lincoln City, OR 97367.
Healthy Environmental Action League, Route 1, Box 16, Days Creek, OR 97429.
Hoedads Coop Inc., Box 10107, Eugene, OR 97440.
Southern Oregon Citizens Against Toxic Sprays (Josephine County), Box 325, Grants Pass, OR 97526.
Women's International League for Peace and Freedom, Box 274, Cottage Grove, OR 97424.
Southern Oregon Citizens Against Toxic Sprays (Jackson County), Box 578, Ashland, OR 97520.
Summit Coalition for Alternatives to Pesticides, Box 94, Summit Star Route, Blodgett, OR 97326.
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Nehalem Valley Historical Society, Rural Route, Birkenfeld, OR 97016.
Mudsharks, 11 South Sixth, Rm. 201, Box 584, Cottage Grove, OR 97424.
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Millicoma Improvement Group, Box 642, Allegany, OR 97407.
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Olympic Peninsula Citizens Against Toxic Spray, Box 86, Beaver, WA 98305.
Chimacum Watershed Association, Rt. 2, Box 365B, Port Townsend, WA 98368.
Citizens for Alternatives to Toxic Herbicides, 2737 25A Street, Clarkston, WA 99403.
Friends of the Earth, 4512 University Way NE, Seattle, WA 98105.
Olympic Reforestation Inc., Box 444, Port Townsend, WA 98368.
Tilth Association, Route 2, Box 190-A, Arlington, WA 98223.
Marmot Construction Works, 114 34th Ave., Seattle, WA 98122.

Libby Creek Alternatives to Pesticides, Box 143, Carlton, WA 98814.
Citizens Awareness of Pesticides, P.O. Box 159, Bellingham, WA 98227.
Olympia Food Co-op, 921 N. Rogers, Olympia, WA 98502.

California

Californians for Alternatives to Toxic Sprays, Box 117, Goodyear's Bar, CA 95944.
Group for Organic Alternatives to Toxic Sprays, c/o Northcoast Environmental Center, 1091 H Street, Arcata, CA 95521.
Northern California Citizens Against Toxic Sprays, c/o Spohn, Star Route Denny, Burnt Ranch, CA 95527.
Salmon River Concerned Citizens, Box 610, Forks of Salmon, CA 96031.
Siskiyou Citizen's Against Toxic Sprays, 201 Sheldon Ave., Mt. Shasta, CA 96067.
Somes Bar Concerned Citizens, Denise Bennet, Ti Bar Road, Somes Bar, CA 95568.

Canada

M.I.C.E., Box 224, Errington, B.C. Canada V0R 1V0.
Okanagen Greenpeace, c/o P. Chataway, 561 Sutherland Ave., Kelowna, B.C. Canada V1Y 5X3.

NCAP NEWS

WINTER 1981

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Our thanks to the many other people who have volunteered their time and provided support in making this issue possible.

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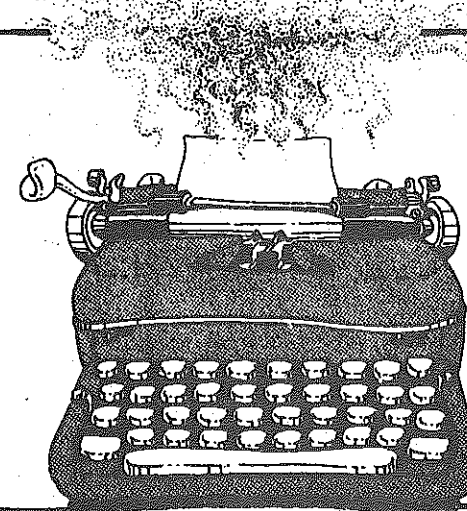
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Correction: The photograph appearing on page two of our last issue ("Alkali Lake, Oregon: Biological Time Bomb") should have been credited to Lloyd Baker.

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WANTED: A viable, vital, stimulating Letters Column for NCAP NEWS, to be filled with letters from our thoughtful readers. Please respond to/correspond with us! We need to know what you have found useful, what suggestions for improvements you have, or any general reactions or thoughts that the NEWS has generated. (Be sure to address letters to NCAP NEWS, not simply to NCAP, so that we know you intend for your letter to be published.)

"Enough to Make Your Hair Stand Up"

The Industrial Bio-Test Caper

by Paul Merrell

"Instead of changing the summary to more accurately reflect the data, however, the data had been changed to more accurately reflect the summary."

—Food & Drug Administration official Adrian Gross, describing data falsification by G.D. Searle & Co., involving drug Flagyl. *Science* 198:1228, Dec. 23, 1977.

* * * * *

I was hesitant to do the Industrial Bio-Test story because it looked like a bottomless pit—I distinctly remember saying that—and I was right. Industrial Bio-Test is a Pandora's Box. Writers who have known of the story for years have ducked it because of the enormity of facts and issues involved:

- Industrial Bio-Test Laboratories, Inc., a subsidiary of Nalco Chemical Co., is the nation's largest commercial toxicological testing company.

- Over the years, IBT has performed thousands of studies of pesticides, drugs, cosmetics and other chemicals. On the basis of IBT data, hundreds of products have been registered as safe for use with government agencies by companies which contracted with IBT to develop the data. (See partial listing of pesticide products involved following this story.)

- In 1977, the government learned that IBT had been falsifying test results on a massive scale. At least four large chemical companies knew that data had been falsified for pesticide products.

- Since that time, government has done little to clean up the mess. All chemicals involved are still registered for use in the U.S.; and government officials stand silent as chemical companies repeatedly refer to government registration as the public's guarantee of product safety.

- Although the Canadian and U.S. governments have not yet banned sale and use of any chemicals involved in the IBT scandal, the Swedish government has. Two years ago, Sweden prohibited sale of six chemicals as a direct result of the IBT caper.¹

The story of how the IBT scandal was discovered is interesting. According to *Science* magazine, "in 1975, Food & Drug Administration officials received a tip from an employee of Syntex Corp., a drug manufacturer in California, that there were problems with tests that Syntex had submitted to the FDA. An FDA official, instead of pulling a file on Syntex, pulled one by mistake on Industrial Bio-Test, an independent laboratory that had done a study for Syntex on an antiarthritic drug called Naprosyn. On reading it, he found enough deficiencies to warrant an inspection. . . ." Adrian Gross, then associate director of nonclinical studies in FDA's Bureau of Drugs, was quoted as say-

ing, "What we found there is enough to make your hair stand up."²

Science reported that an investigation of IBT was begun by the FDA, the Environmental Protection Agency, the National Cancer Institute, and the Inspector General of the Department of Health, Education & Welfare.

In 1978, the *Washington Post* reported that "federal investigators say they have evidence that the nation's biggest commercial testing laboratory deliberately falsified data submitted to the government on potential carcinogens and that at least four major pesticide manufacturers were aware of the problem."³ The *Post* said EPA and FDA had referred results of their investigations to the Justice Department, and quoted "knowledgeable federal regulatory officials" as saying audits of IBT data "turned up far more problems than investigators had originally expected."

"At the beginning of this thing, we thought we were dealing with problems confined to just one three-year period," said a senior official involved in the probe. "Now we are in a position where we have to regard all of IBT's data as suspect." According to the *Post*, the extent of the problem caused by the lab's alleged data tampering was described by a senior official involved in the investigation, "who said the World Health Organization, which sets international safety exposure standards for potentially harmful chemicals and pesticides, also relied heavily on data from IBT."

The *Post* said IBT changed its top management after the data tampering took place. Some tampering took the form of "substitutions of healthy animals kept by IBT at the labs for animals that became ill during the tests." Investigators also discovered that IBT researchers failed in some cases to number test animals, making it impossible to tell which were affected by test substances.

The *Wall Street Journal* said irregularities at IBT involved "slipups [that] may have been deliberate." A former IBT technician told of a "toxicologist's pretending to kill rats for autopsy to examine a drug's effect on them; in truth, he said, the rats had already died of neglect or of exposure to the drug, but the autopsy findings didn't reflect this. The technician figures that the pretense was aimed at concealing inadequate animal care or hiding the high death rate among animals exposed to the drug, or both."⁴

One study, the IBT technician said, was termed "the magic pencil study" because complete blood analyses appeared in the final report, even though most of the analyses had never been performed. Chevron Chemical (now also under investigation by the Justice Department) "concluded that the IBT rat study had lasted just 18 months, and that six months of fabricated data had been added to the final report." (The study involved the insecticide Orthen, marketed by Chevron.)

Syntex Corp. filed a lawsuit for unspecified damages against IBT because of problems they had discovered with the tests on Naprosyn. According to Syntex, there were serious shortcomings in tests: incomplete records, evidence of tumors that didn't appear in the final report, rats recorded as having died twice, and other animals whose weights continued to be logged along with other test animals long after they had been listed as dead.

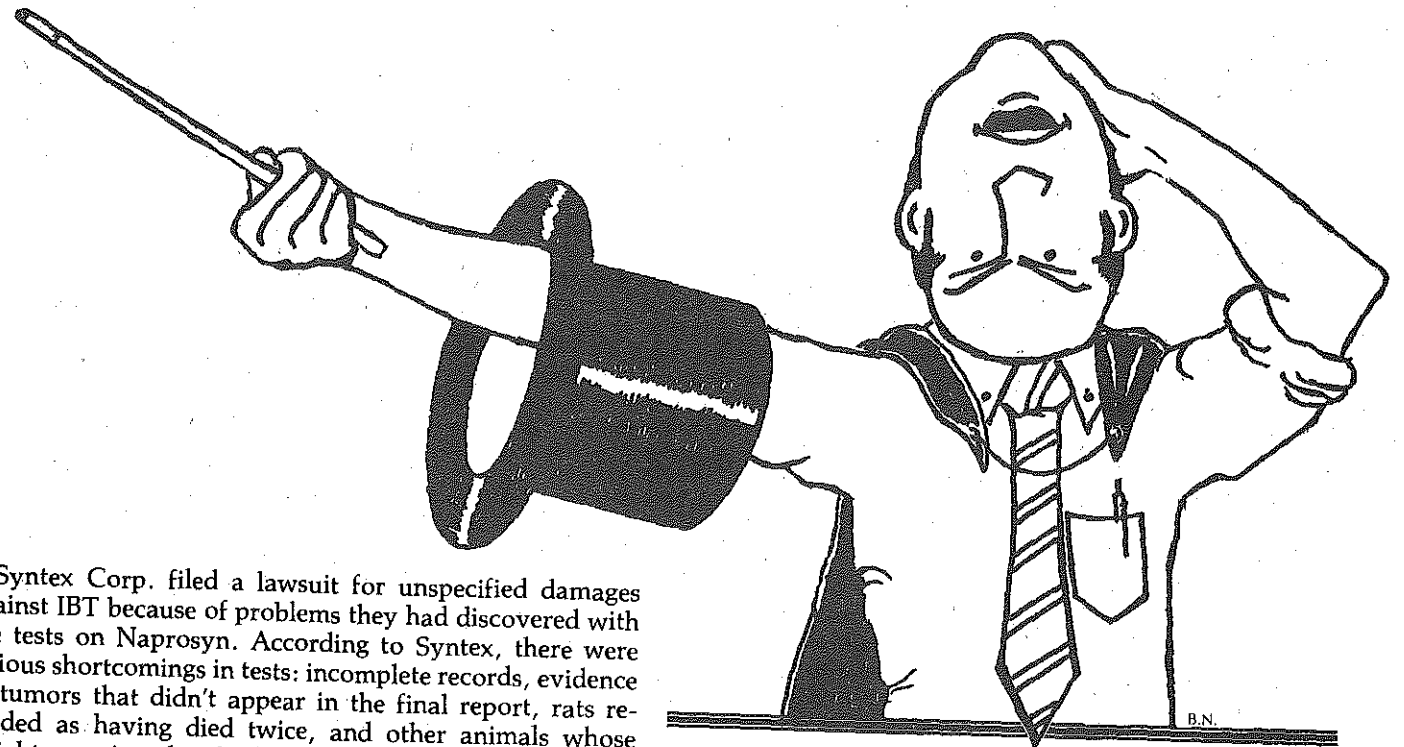
The *Journal* said, "the uproar grew louder . . . when IBT said that Mr. Frisque [IBT's former president] had inadvertently ordered the shredding of hundreds of records requested by the EPA. Among the shredded data were seven long-term studies on the cancer-causing potential of substances used in plastics, herbicides, and cyclamates, the artificial sweeteners."

By November, 1980, a Canadian reporter had learned from EPA official Dr. Diana Reisa that nearly 250 of 600 studies done by IBT—and later reviewed by U.S. and Canadian authorities—were found invalid.⁵ Reisa said 99 percent of long-term studies were invalid. Other problem areas are:

- Tests for birth defects—76 percent invalid;
- Tests for mutations—50 percent invalid;
- Tests on toxic effects to the nervous system—50 percent invalid;
- Tests to determine the toxicity of chemicals if swallowed, breathed or absorbed through skin—30 percent invalid; and
- Medium-term tests for a variety of effects—50 percent invalid.¹

One vexing thing about the IBT fiasco is the continuing secrecy. It is nearly impossible to determine what studies are valid for individual chemicals, the information that would be most useful to persons desiring to protect themselves from the chemicals' effects. EPA's Reisa, who has been assigned to other duties since granting her interview with the Canadian reporter, said "only the companies manufacturing the products would be notified of problems with specific chemicals."¹

At one time, EPA imposed a moratorium on agency action involving pesticides supported by IBT data. But by July, 1980, EPA had announced that under a new policy, "in cases where virtually the entire data base is invalid and there is a strong possibility of substantial health risk, the Agency will consider cancellation. In cases of major data



gaps, the registrant [chemical company] will be required to fill the data gaps as soon as possible, and in cases of minor data gaps, the gaps will be filled through the Registration Standard Data Call-in process" (a process that takes up to five years before a company is even requested to begin new studies).⁵

Estimates vary of the actual number of tests performed by IBT (and other labs) which will have to be redone. But the *Wall Street Journal* reported that EPA is asking 235 chemical companies to reexamine 4,363 IBT tests that were crucial in obtaining federal clearance to market 483 different pesticides.⁴ The cost to industry to retest the suspect pesticides discovered so far was estimated at \$100 million by Dr. Alex Morrison, head of Canada's federal health protection branch.⁶

And the problem doesn't end with studies performed by the IBT. EPA spokesman Jim Sibbison said the agency is auditing test results from "nine or ten laboratories because

How Low Can You Go, Monsanto?

Last issue, NCAP NEWS reported that discrepancies between summaries of Monsanto Corporation's trade secret registration data on herbicide Roundup and independently-performed studies had raised "grave questions about adequacy of new pesticide registration procedures administered by the EPA."

After that story was published, NCAP learned that virtually all of Monsanto's Roundup toxicological registration data resulted from studies performed by the discredited Industrial Bio-Test Laboratories, Inc. Many of these studies correlate closely with studies that EPA has required Monsanto to duplicate (*Federal Register*, Vol. 43, No. 234, Tuesday, Dec. 5, 1978), without explaining their reasons.

NCAP has a list of the invalidated tests.

of the possibility of careless or deliberately careless [1] work." Previous massive deficiencies in registration data and recordkeeping have been discovered for tests performed by G.D. Searle & Co., of Skokie, IL; Biometric Testing, Inc., of Englewood Cliffs, NJ; and other laboratories. Numerous other laboratories have been found wanting in good lab practices and recordkeeping, with university laboratories generally ranking the lowest.⁷

IBT data were relied upon by EPA and ultimately by corresponding agencies of several counties to set allowable concentrations in foodstuffs for at least 160 pesticide products.⁷

Why would IBT consistently falsify results in one direction—toward obscuring harmful effects? Many theories have been advanced: generally shoddy lab techniques, financial corner-cutting, and the "few bad apples" theory, but none of them account for consistent bias. Perhaps someone should investigate the possibility of under-the-table financial connections between IBT and chemical companies, especially since it is known that at least four major companies knew that data had been falsified for their products.

Throughout, there has been a tendency for industry, government, and the press to point the finger at the laboratories and to treat each instance of data falsification as an isolated example. Given that IBT practiced data falsification on a large scale, it is difficult to imagine how any study done by IBT can be considered valid without replicating every experiment. EPA, ever responsive to chemical company interests, plans to examine each study on a case-by-case basis,⁸ bear the costs of such examinations, and apparently accept the burden of proof. Wholesale rejection

of IBT data and withdrawal of pesticide registrations for products involved would seem to be more in line with EPA's mandate from Congress, but is probably impractical because of industry's influence in the nation's capital.

While EPA, perhaps one of the most secretive federal agencies, continues their investigation, humanity is exposed to chemicals involved in the IBT caper. Companies manufacturing the chemicals involved reap financial benefits granted by law only to those who have properly submitted adequate data supporting their products' safety. Those companies may have even known that registration data were falsified, as the *Washington Post* reported;³ but no public examination of that possibility has surfaced.

Reporter Peter von Stackelberg says that a U.S. grand jury is still investigating the matter in Chicago.⁴ Perhaps when the grand jury reports its findings, the public will begin to learn the candid facts. Perhaps. . .

References

- ¹"Fungicide Not Taken Off Market Despite Invalid Tests," Peter von Stackelberg, Regina, Saskatchewan *Leader-Post*, Nov. 4, 1980.
- ²"As Luck Would Have It . . .," R. Jeffrey Smith, *Science* 198:1228, Dec. 23, 1977.
- ³"Cancer Data Falsified, FDA Says," *Washington Post*, March 9, 1978, as reprinted in *Lewiston (Idaho) Morning Tribune*.
- ⁴"A Lab's Troubles Raise Doubts About Quality of Drug Tests in U.S.," Joann S. Lublin, *Wall Street Journal*, Feb. 21, 1978, pg. 1.
- ⁵"EPA Issues Policy on IBT-Generated Data," *Weekly Report from OPP*, Registration Support Division, Office of Pesticide Programs, Office of Pesticides & Toxic Substances, U.S. EPA, Vol. IV:31, July 30, 1980.
- ⁶"Safety Last: Tests that Fail the Test," Peter von Stackelberg, *MacLean's*, Aug. 25, 1980, pg. 49.
- ⁷"Creative Penmanship in Animal Testing Prompts FDA Controls," R. Jeffrey Smith, *Science* 198:1227-1229, Dec. 23, 1977.

A Possible Solution to the IBT Dilemma

After Paul Merrell researched and wrote the previous story on Industrial Bio-Test, he felt strongly enough about the issue to give much thought to approaching a resolution to the problem that might be acceptable to all parties involved. His proposal follows.—Ed.

Strangely enough, our nation's patent laws are probably the largest single cause of chemical health and safety data falsification. Manufacturers who develop new chemicals have only 14 years to fully test a new product, get it into production and the marketplace, and collect the higher profits available to patentholders. During that 14-year period, patentholders have exclusive rights to market their inventions. After that time, the invention is in the public domain; and if the invention is a good one, competitors enter the market, driving the price down.

Under incredible pressure to market their product as quickly as feasible, executives have to insist that necessary studies be completed at the earliest possible date. The Industrial Bio-Test fiasco suggests that if data falsification will get a product to market quicker, data will be falsified.

A more rational approach might be legislation which would allow the chemical industry a liberal grace period in which to study effects of their chemical inventions be-

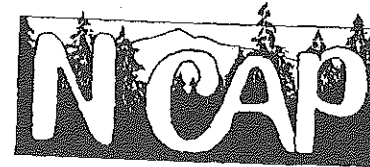
fore the patent clock begins ticking.

In the case of products already on the market supported by invalid tests (such as chemicals registered with data generated by Industrial Bio-Test Laboratories), there is little hope industry will agree to remove their products from the market while new health studies are performed unless special incentives are provided.

To head off a protracted struggle between the public and industry, it might be pragmatic to consider frank discussion of alternatives instead. One incentive might be to grant companies caught with their pants down a special bonus in patent protection extensions if they agree to stop sales while products are retested. If products pass new tests (both old and new tests should be publicly available), companies would be granted the patent period "bonus." The higher prices which can be charged during the extended patent period would help manufacturers recover costs of retesting their products.

The idea would also allow industry to discover what potential liability they face. As it stands now, they have received notice there may be problems with their products. To continue marketing can only increase liability if injuries should occur.

The idea undoubtedly has pitfalls; but it seems as though it might be worth discussing. Any feedback?



**NORTHWEST COALITION for
ALTERNATIVES to PESTICIDES**
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WARNING!



The following list of pesticides was received from the U.S. Environmental Protection Agency by NCAP in response to a Freedom of Information Act request. Health and safety information used to register these pesticides (as well as others which have not yet been disclosed) was developed by Industrial Bio-Test Laboratories, Inc., the nation's largest independent commercial laboratories. IBT is now under investigation for data falsifica-

tion. Ninety-nine percent of the cancer studies involved are considered invalid. Other invalid studies were for birth defects, mutations, toxic effects on the nervous system, and tests to determine toxicity of the chemical if swallowed, breathed or absorbed through the skin. EPA has not revealed which studies for what chemicals are invalid. Please copy this warning and pass it on. For further details, contact NCAP.

- | | | | | |
|--|---|---|---|--|
| 4-Amino Pyridine—Philips
Petrochem | Chloropropham—PPG (Furloc) | Fenvalerate—Shell | Nalco 7340—Nalco | R-69—S.C. Johnson |
| Acarol—Ciba Geigy | Chloropropylate—Ciba Geigy | Flo Mo—Sellers | Nalco 7623—Nalco | Rabon—Shell (Gardona) |
| Accel—Shell | Chlorpyrifos—Velsicol
(Dursban) | Fluoridam—3M | Nalco 7644—Nalco | Ramrod—Monsanto |
| Adocide—Nalco | Chlorothalonil—Diamond | Fluorodifen—Ciba Geigy
(Peforan) | Nalco 8844—Nalco | Randox—Monsanto (Allidichlor) |
| Alachlor—Monsanto (Lasso) | Shamrock (Daconil) | Folpet—Chevron/Stauffer
(Phaltan) | Nalco 4WC 317—Nalco | Rydex—U.S. Borax |
| Alar—Uniroyal | Cidial—Montedison (Elsan,
Phenthoate) | Formetanate | Naled—Chevron (Dibrom) | Santophen—Monsanto |
| Alnap—Uniroyal | Ciodrin—Shell (Crotoxyphos) | Formetanate Hydrochloride—
Nor Am (Carzol) | NaO Cl—Jones Chemical/P&G | Sectrol—3M |
| Altosid-Methoprene—Zoecon | Cobex—U.S. Borax | | Nemacur—Chemagro | Sencor—Chemagro (Metribuzin) |
| Ametryn—Ciba Geigy | Curacon—Ciba Geigy | | (Fenamiphos) | Silvex—Rhodia |
| Antor—Hercules | Cycle—Ciba Geigy | | Nemagon—Shell (DBCP) | Simazine—Ciba Geigy |
| Asulam—Rhodia | (Profanofas) | | Nemaphene—Shell | Sodium Azide—PPG |
| Atrazine—Shell | Cycoel—American Cyanamid | | Nicotine/Nicotine Sulfate—
Black Leaf | Sodium Bromide and Trichloro-
s-Triazine-Trione—Jones |
| Avadex—Monsanto | Cyprazine—Gulf (Outfox) | | Norea—Hercules (Herban) | Sodium Chlorate—Pennwalt |
| Avenge—American Cyanamid
(difenzoquat) | Cypomid—Gulf | | ODAA—Arbrook
(Glutaraldehyde) | Sumitrol—Ciba Geigy |
| Azodrin—Shell | | | Omazine—Olin | Sumethryn |
| Bacillus Thurgiensis—Sandoz
(Wander) | 2,4-D—Hercules/Dow (NACA) | | Orthene—Chevron | Supracide—Ciba Geigy |
| Barban—Gulf (Carbyne) | Dacnil—Diamond Shamrock | | Oxadiazon—Rhodia | System E—3M |
| Bardike—International Pain
Company | Dacthal—Diamond Shamrock
(DCPA) | | Oxycarboxin—Uniroyal | System M—3M |
| Baygon—Chemagro (Proxpur) | Dasanit—Chemagro
(Fensolofthion) | | Paraquat—Chevron | Terbufos—American Cyanamid |
| Benzadox—Gulf (Topside) | D.C. 5700—Dow Corning | | Pencap E—Pennwalt | Terbutylazine—Ciba Geigy |
| Bicep—Ciba Geigy | DDVP—Zoecon | | Pencap M—Pennwalt | Terbutryn—Ciba Geigy |
| Bifenox—Mobil (Modown) | Delachlor | | Perfludone—3M | Terrazole—Olin Corporation |
| Binapacryl—FMC (Ensdan) | Delnav—Hercules (Dioxathion) | | Permethrin—FMC | Thidiazuron—Nor Am |
| Bis (Tri-M-Butyl) Oxide—
M&T | Desmedipham—Nor Am | | Phenmedipham—Nor Am
(Bentanal) | Thiodan—FMC (Endosulfan) |
| Bladex—Shell (Cyandazine) | Dichlobenil—Casoran | | Phorate—American Cyanamid | Thiofanox—Diamond Shamrock |
| Bolero—Chevron (Thiobencarb) | Diethanol Amine 2,4-Di-
chlorophenoxy acetate—
Chevron | | Phosalone—Rhodia | Thiram |
| Botran—Upjohn | Diethanol Amine 2-(2-Methyl-4-
chlorophenoxy) Propionate—
Chevron | | Phosphamidon—Chevron
(Dimetcon) | TL 1076—MGK |
| Brodifacoum—ICI | Difolatin—Chevron (Captafol) | | Picloram—Dow (Tordant) | Topsin M—Pennwalt
(Thiophinate) |
| Bromfenoxim—Ciba Geigy | Dinoseb—Dow | | Pik-Off—Ciba Geigy | Torak—Hercules (Dialifor) |
| Bromopropylate—Ciba Geigy | Di-Syston—Chemagro
(Disulfoton) | | Piperonyl Butoxide—MGK | Toxaphene—Hercules |
| Busan 74—Buckman (TCMTB) | DMDMH-55—Glyco (Dantoin) | | Plictram—Shell | Triadine—Olin |
| Butam—Gulf | Drepam—Montedison | | Polyram—FMC (Metiram) | Triforine—Chevron |
| Bux—Chevron | DSMA—Diamond Shamrock | | Potassium Hexafluoroarsenate—
Pennwalt | Triphenyltin Hydroxide—
Thompson-Hayward |
| Cacodylic Acid—Ansol | Dual—Ciba Geigy (Metolachlor) | | Potassium and Sodium Azide—
PPG | Trivax—Shandon |
| CA (OCL)—FMC (Cyanurate) | Dynap—Uniroyal | | PPG 124—PPG | Vapona—Shell (DDVP) |
| Captan—American Seed
Company/Chevron | Embark—3M (Mefluidide) | | PPG 135—PPG | Vegadex—Monsanto (Sulfallate) |
| Carbaryl—Monsanto | Endothal—3M/Pennwalt | | PPG 148—PPG | Vel—Sandoz (Propetamphos) |
| Carbofuran—FMC (Furadan) | EPN—E.I. Dupont/Velsicol/
Nissan | | PPG 171—PPG | Vendex—Shell |
| Cela-Triforine—Chevron | Ethalfuralin | | PPG 172—PPG | Valpar—Dupont |
| Chipco—Rhodia (Iprodione) | Ethiolate—Gulf | | Profluralin—Ciba Geigy | Vinyzene—Ventron |
| Chlorobromuron—Ciba Geigy
(Maloren) | Fenitrothion—Sumitomo
(Sumithion) | | Promecarb | Visco Adomall—Nalco |
| P-Chlorophenyl-N,N 1-dimethyl
Allophanate—PPG | | | Prometon—Ciba Geigy
(Promitol) | Visco P-25-F—Nalco |
| | | | Propanil | Visco 1151—Nalco |
| | | | Protham—PPG | Visco 1152—Nalco |
| | | | Prowl—American Cyanamid | Visco 1153—Nalco |
| | | | Pydrin—Shell | Visco 3990—Nalco |
| | | | Pyrethrin—MGK | Vitavax—Uniroyal |
| | | | | Vydate—E.I. Dupont (Oxamyl) |
| | | | | Zinophos—Nor Am |

* Chemicals commonly used in forest management in the Northwest.

Dow Acquires Ethical Concern

by Frances McCarthy

In November, 1980, Dow Chemical Co. agreed to acquire the "ethical" pharmaceutical business of Richardson-Merrell, Inc., for \$260 million of Dow common stock to be passed directly to holders of Richardson-Merrell stock on a tax-free basis. (Ethical pharmaceuticals are prescription drugs.)

Richardson-Merrell was in the news last March, when a Florida federal court ruled in favor of a couple who claimed Bendectin, an anti-nausea drug marketed by Richardson-Merrell specifically for use in pregnancy, had caused multiple birth defects (malformed chest, right arm and hand) in their son. A retrial was subsequently ordered on technical grounds and is pending, as are at least six additional cases involving Bendectin.

In 1964, Richardson-Merrell pleaded no contest to a criminal indictment for withholding information and making false statements to the Food & Drug Administration about another drug, Mer-29, a "miracle" anticholesterol drug which causes cataracts, baldness, skin irritations, nausea and vomiting.

Mer-29, or Triparanol, was marketed for 22 months starting in June, 1960, and was used by nearly 400,000 Americans during that time. It had been approved by FDA over the misgivings of at least one FDA pharmacologist. By early 1961, Richardson-Merrell had been apprised of its severe side effects, as reports came from doctors, patients, and other drug companies. Richardson-Merrell denied the possibility of such effects, although its own tests on animals amply demonstrated the validity of the reports. It

claimed, for example, that its own tests had shown no eye damage whatsoever in test animals, when in fact 25 out of 29 rats in their own study had developed "corneal opacities" (cataracts) after being given Mer-29.

The extent of the company's falsification of test data was brought to FDA's attention only through a chance meeting in a Cincinnati parking lot between an FDA inspector and a telephone company employee whose wife had worked in Richardson-Merrell's lab. As a result of that chance encounter, FDA inspectors made an unprecedented "raid" on Richardson-Merrell's Cincinnati plant in April, 1962. Two days later, Richardson-Merrell withdrew Mer-29 from the market. In 1964, Richardson-Merrell, one of its pharmacologists, its laboratory chief, and one of its vice-presidents pleaded no-contest to grand jury criminal charges on two to six counts of making false, fictitious and fraudulent statements to FDA about Mer-29.

Included in the charges against the company were falsified long-term chronic toxicity studies on monkeys which were conducted for less than half the months claimed, with some of the dose levels recorded never having been administered. One control animal was treated with another drug for six months of the study (a control animal is an untreated animal for purposes of comparison). The company report on which FDA approval had been based had claimed no loss of body weight and no liver or gall bladder damage, when in fact the monkeys had suffered all of these symptoms. One monkey which disappeared from the lab after its condition had deteriorated was listed in the report to FDA as having survived unharmed. The criminal indictment was followed by over 500 civil lawsuits (of which the *Wall Street Journal* reported "over 85" had been settled as of March, 1980).

The year before Richardson-Merrell began marketing Mer-29, the company had distributed a new German drug to private physicians in the U.S. for clinical trials on their patients. While these tests on human subjects were under way, Richardson-Merrell undertook animal tests on the same drug. Results of both would be submitted to FDA for approval to market the drug as an over-the-counter "wonder drug" for an astonishing range of symptoms. During the animal tests, all female rats in one test died after administration of the drug; 22 of 30 male rats in one test, and 32 of 37 rats in another, died the same day the drug was administered.

The "wonder drug" was thalidomide. In spite of the results of its animal tests (none of which included reproductive studies), Richardson-Merrell continued its human testing program and extended it to include pregnant women. The company distributed 2,528,412 thalidomide tablets to doctors, who gave them to approximately 20,000 patients, in unlabeled containers. Richardson-Merrell did not provide consent forms for patients to sign, and few were informed that the drug they were given was on clinical trial.

For nineteen months, Richardson-Merrell distributed thalidomide, a drug capable of causing appalling birth de-

fects, without conducting a single reproductive study. (On its Mer-29, the company had already completed such studies and had been sufficiently concerned to place a warning against use in pregnancy on the label.) In spite of its own inadequate animal studies and reports from Europe of permanently crippling peripheral neuritis associated with thalidomide (information withheld from FDA by Richardson-Merrell), the company submitted its application to FDA with complete confidence, its marketing plans already in progress. (Only much later, during legal proceedings in behalf of thalidomide children, was it discovered that at least one of the few published studies on thalidomide in pregnancy submitted to FDA was a fabrication. The study, published in the *American Journal of Obstetrics and Gynecology*, was written not by the author cited, a Cincinnati physician, but by the medical director of Richardson-Merrell and his secretary, and was based on unverifiable verbal accounts from patients.)

A single FDA pharmacologist-physician, Frances Kelsey, prevented approval of Richardson-Merrell's application for thalidomide. Kelsey was suspicious of the application from the beginning, noting insufficient detail and veracity in clinical studies (3,156 cases cited were in foreign literature), incomplete chronic toxicity data, limited information about the drug's stability, inadequate and misrepresented data on side effects, and lack of data to support claims about use during pregnancy (in particular, the ghost-written study noted above). In an internal FDA analysis of the material submitted by Richardson-Merrell, Kelsey's husband, also a pharmacologist with FDA, concluded one of his critiques, "I cannot believe this to be honest incompetence."

Richardson-Merrell increased its pressure against Kelsey and FDA as the company's marketing date approached. Dr. Kelsey, supported by her employers, persisted in refusing to grant approval until Richardson-Merrell had supplied proof of safety, particularly regarding the drug's effects on the fetus and its association with peripheral neuritis. Thanks to her resolve and scientific integrity, thalidomide was never marketed in this country. It is un-

known, however, how many children were affected by the more than 2.5 million thalidomide tablets distributed in Richardson-Merrell's "clinical trials." Richardson-Merrell fought the liability suits charged against it with all the legal sophistication and ingenuity a corporation can command, and consistently imposed the utmost secrecy on its settlements. (One of its legal tactics was to demand proof of exposure to the drug, which most patients—never having been told its name—could not provide, and doctors participating in the clinical trials had not been encouraged to keep records.)

In Canada, where Richardson-Merrell continued to market thalidomide after the news of its teratogenicity was known and the company had withdrawn its application to FDA, many more thalidomide babies were born. In the course of its maneuvers there, Richardson-Merrell asserted that its legal obligations to its shareholders took priority over any moral obligation to locate and financially compensate thalidomide children.

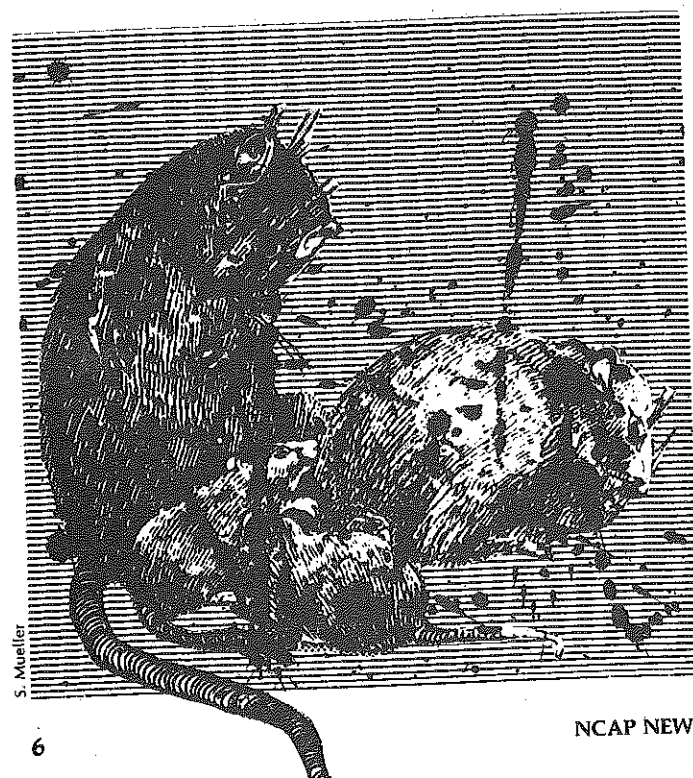
Thalidomide and Mer-29 are no longer marketed by Richardson-Merrell. Bendectin, however, is sold in about 20 countries, including the U.S. By the time of the Florida hearing, 5 million American women had used it.

The purchase of Richardson-Merrell by Dow Chemical was described by one securities analyst as an "acquisition of expertise in litigating product liability suits." In civil cases involving products ranging from Agent Orange to roofing materials, Dow currently faces potential liability estimated in excess of \$5 billion.

Acquisition of Richardson-Merrell's "ethical" pharmaceutical business will generate sales of about \$800 million annually, "making Dow a significant factor in the health-products business," Dow said.

References

"Jury Awards Damages for Birth Defects in Suit Citing Richardson-Merrell Drug," Gail Bronson, *Wall Street Journal*, March 24, 1980, p. 20.
 "Dow Chemical to Pay \$260 million Stock for Richardson-Merrell's Drug Business," Tim Metz, *Wall Street Journal*, Nov. 3, 1980, p. 2.
Suffer the Children: The Story of Thalidomide; The Insight Team of *The Sunday Times* of London, Viking Press, N.Y., 1979, 309 pp., \$12.95.



EMERGENCY ACTION TAKEN ON 2,4-D

Ed. note: shortly after NCAP NEWS was printed, this story developed. Because of its importance to millions of citizens who face exposure to 2,4-D, we decided to sacrifice one illustration to include it.

Toronto (Jan. 27, 1981)—Emergency action to restrict the use of herbicide 2,4-D was taken today by Canada's federal agriculture department. The action came after tests completed in October found various dioxins in 2,4-D. (See related earlier story on page 23.) According to today's Canadian press reports, dioxins found included two isomers of TCDD.

Canada placed an immediate ban on sale of ester feedstocks to chemical manufacturers producing 2,4-D. Sale and use of 2,4-D ester weedkillers will be permitted for the rest of this year, but all ester formulations must be free of dioxins by 1982 under conditions of the order. More drastic action would have jeopardized farmers' ability to produce food, a government spokesman said.

The action did not affect amine formulations of 2,4-D, al-

though high levels of dioxins were also found in four of seven samples of amine-based 2,4-D. Most 2,4-D used in Canada is the amine-type, which is commonly used in home and garden products.

Canada has taken no action on the dioxin-contaminated 2,4,5-T (although three provinces have) and has taken no action on other pesticides considered by U.S. EPA as highly likely to be contaminated by dioxin: Bifenox, Chloranil, Dicamba and Dicamba dimethyl amine salt, Disul sodium (Sesone), Hexachlorophene, Isobac 20, Ronnel, Silvex, and Nitrofen (also known as TOK).

Questions have also been raised about potential health hazards of dioxin-free 2,4-D and of various compounds produced when 2,4-D is broken down in living cells. (See article on page 23.) Several studies indicate that phenoxy herbicides, including 2,4-D, are equally as toxic when purified.

According to many critics, the dioxin issue is a "red herring" employed by chemical companies to deflect attention from well-established hazards of dioxin-free compounds.

NCAP's (Prehearing) Benefits Brief

by Judith Kahle

The Dow Chemical Company has completed its risk case, and at the present time, the Environmental Protection Agency is presenting its rebuttal case for risk. NCAP has not been able to have representatives there in DC, so a summary and evaluation of the remainder of the risk segment can't be presented here.

Preliminaries for the benefits segment of the case began some time ago, with parties making and responding to formal and informal discovery requests. (These are requests to other parties for data, files, reports, etc., that are relevant to their case.) Motions for field hearings were filed by several parties, including NCAP, EPA, Dow, USDA, and the National Forest Products Association have all said that if field hearings are held in Oregon, they would likely take advantage of the locale to present their west coast forestry witnesses. This would allow NCAP to present its case and hear EPA's case, as well as to cross-examine witnesses of other parties.

The benefits segment is scheduled to begin in Washington, DC on February 3, although this may be delayed due to matters that may come up during pre-hearing conferences and submissions.

NCAP filed its pre-hearing benefits brief on January 12, which appears below. The brief basically states what NCAP's position is, and what points it hopes to cover during the presentation of its case. It covers only economic costs and benefits of the use of 2,4,5-T and Silvex. (NCAP's pre-hearing risk brief was published in Vol. 1 No. 4 of NCAP NEWS.)

* * * * *

The Northwest Coalition for Alternatives to Pesticides holds that the alleged economic benefits of 2,4,5-T and Silvex are not sufficient to warrant their continued use and registration. In as much as the burden of proof lies on the registrant, it is the responsibility of the registrant to supply the necessary information for a complete evaluation of the benefits. The current models for evaluating costs and benefits are inadequate. NCAP posits, therefore, that until such a time that an adequate model for evaluating costs and benefits is derived, registration of 2,4,5-T and Silvex should be cancelled.

Current evaluations by the chemical industry and user groups, as well as for non-chemical alternatives, rest upon poor methodology and reach faulty conclusions. The studies often exclude known economic effects from their calculations. They often use minimal presentation of actual field work as a basis for extrapolation of costs and benefits, use hypothetical rather than empirical data, and employ incorrect statistical analyses.

In addition, the economic arguments for use and registration of 2,4,5-T and Silvex are based on incomplete models. Those narrow models account only for the costs to the users of the chemicals and the harvesters of the crop. They do not account for all other costs to society at large.

For instance, the models do not consider many known but unquantified costs. Some of these are costs to local, re-

gional, and national government. These include, but are not limited to, costs of litigation (appeals and damage suits), regulatory functions, out-of-court settlements (which are costs to users and manufacturers of the chemicals), government supported research, monitoring Environmental Impact Statements, and record keeping. There is also no estimation of the cost to public timber agencies for public defense of their management programs. There are other costs, such as those of chemical waste storage, and government subsidies to private chemical companies for removal of unsafe products from the market.

The models used to calculate costs also do not look at effects on local economies, direct labor impacts, and local labor projections. They likewise do not account for unknown costs (such as costs to the fishing and shellfish industry, costs to rural communities in terms of contaminated game, and costs to individuals in time and money spent in protecting themselves from damage and personal injury).

In addition, the models used to show benefits and costs are based on an assumption of static technology; that is, no new technologies will be introduced to rectify the perceived problems of vegetation management if 2,4,5-T and Silvex are not available, and money spent for development of chemical control could not be spent for development of other means of control.

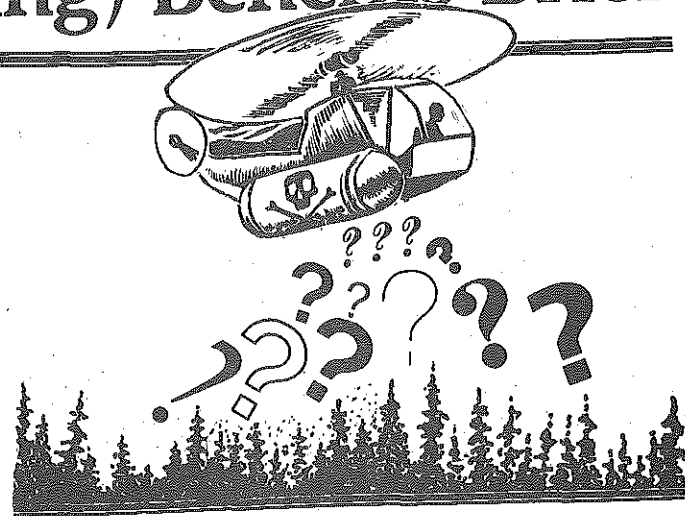
Additionally, the current models scarcely consider the long-term economic effects of 2,4,5-T and Silvex because they are tools for obtaining short-term management goals.

NCAP holds the position that the models on which cost-benefit analyses are made are incomplete. As with the risk, the burden of proof of economic productivity is on the registrant. At the present time, major costs are not accounted for in the cost-analyses of 2,4,5-T and Silvex usage.

In addition, the existing research upon which their registration has been based is deficient and misleading.

Therefore, because costs have been systematically underestimated and the alleged benefits remain unsubstantiated, there is insufficient economic justification for the continued use and registration of 2,4,5-T and Silvex.

Respectfully submitted,
Judith E. Kahle
for NCAP
January 12, 1981



Spring Spray Alert

Below is a partial listing of the herbicide spray programs of public agencies. The figures include both aerial and ground applications for site preparation and conifer release. Treatment by helicopter is the dominant method, with approximately two-thirds of the acres to be treated by this method. Herbicides to be applied include 2,4-D, Roundup, and Tordon 101 (a combination of 2,4-D and Picloram).

There has been no abatement in the number of acres to be treated, and there is, in fact, a significant increase in some places. For instance, the Siuslaw National Forest is tripling the size of their spray program.

Manual treatment with a chain saw is only minimally included as a method of controlling competitive brush, although there have been good indications that chain saw work does control brush in many cases.

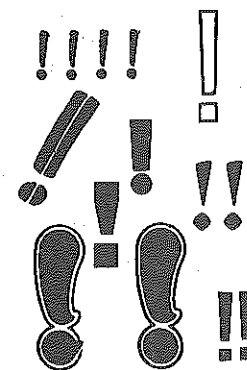
Region 6 forests are operating from EA's (environmental assessments), and in some cases, such as the Siuslaw, a 9000 acre spray program is going forward because the Forest Supervisor found "no significant impact" on the environment resulting from the proposed program. The draft Environmental Impact Statement which was released last year was poorly written, excluded most relevant data for making informed comment, and was poorly organized; it is apparently being extensively rewritten. Additionally, the background data that was referred to in the draft was not available at the regional office.

Public agencies are going ahead with their spray programs as if there has not been significant public concern during the past few years. There seems to have been a decision to ignore protests and valid objections from people who are most affected by the programs. Scientists and foresters alike have also brought both the safety and economic efficiency of these herbicides into serious question—and yet their evaluations also continue to be ignored. It is an excellent example of why people have little respect for government agencies that are supposed to be representing their interests.

We urge people to look at the spray programs in their areas carefully. Maps of proposed projects are posted in agency offices, and personnel should have copies of their environmental assessments available to the public. (The Alsea District of the Siuslaw Forest did not have theirs as late as Jan. 23, however, and yet citizens have only until Jan. 31 to respond. Keep pressing your local office to make these statements available.) Refer to the Winter-Spring issue of NCAP NEWS. (Vol. 1, No. 4) for an expanded article on what people can do to prevent spraying.

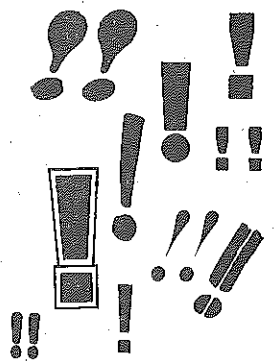
If you're interested in appealing the decision for your area, call the NCAP office (503-344-5044) for information.

We also advise that the public be educated. Write letters to local newspapers, giving information about the proposed projects and any facts you know to be true about the herbicides to be used. (See article on Industrial Bio-Test laboratory and how it relates to Roundup.)



Proposed Spray Programs for 1981 (includes site preparation and conifer release, ground and aerial applications)

Region 6, U.S. Forest Service	BLM Districts
Umpqua N.F. 4400 acres	Salem 600 acres
Willamette N.F. 5500 acres	Eugene 5500 acres
Siuslaw N.F. 9000 acres	Roseburg 8000 acres
Siskiyou N.F. unavailable	Medford 4600 acres
Oregon Dept. of Forestry	Coos Bay 4200 acres
11,000-12,000 acres	



1980 Pocket Gopher Control Program Cancelled

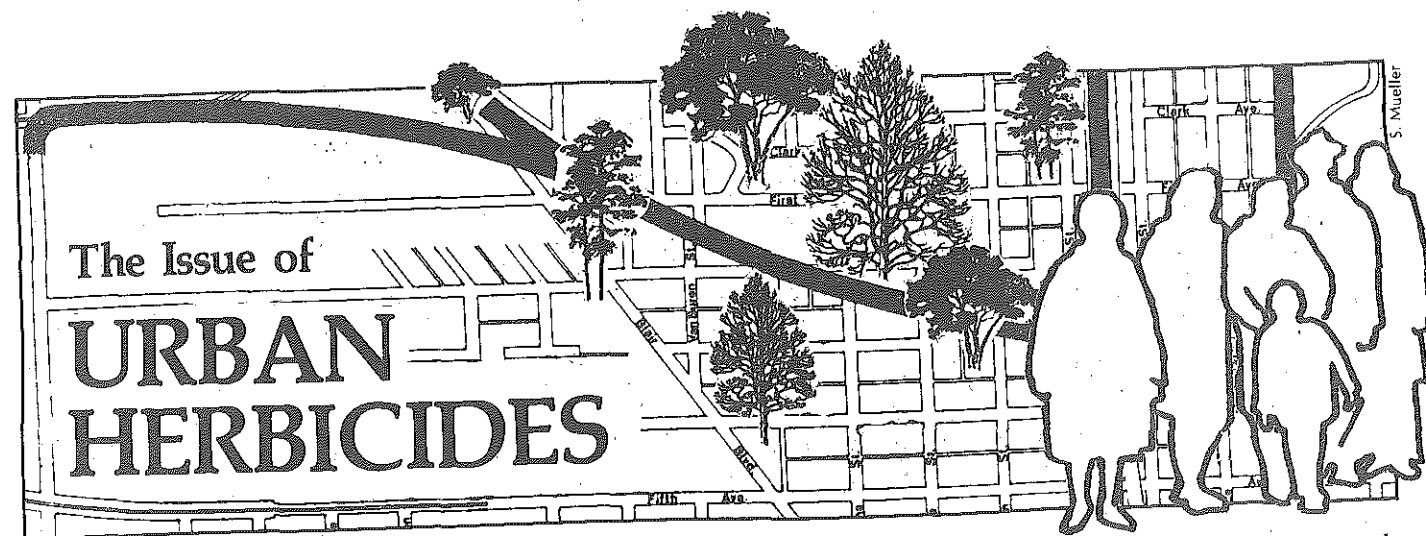
Intervention of the Klamath Indian Game Commission in Andy Gigler's appeal in the Winema National Forest pocket gopher control program was accepted Nov. 28 by Region Six Regional Forester Richard Worthington. The game commission's request for a stay was granted.

The point on which a stay was granted was that the Environment Analysis Report identified eight evaluative criteria to be used, but it used only five of them, either changing, consolidating or eliminating some criteria without explanation.

Worthington concluded it was conceivable that by using the original criteria a different, preferred alternative could have been identified.

On Dec. 5, Winema Forest Supervisor Robert Chadwick notified appellants Gigler and NCAP, and the intervenor game commission and multiple party SOCATS, that he was retracting his Sept. 8 decision to implement the project, and that alternatives would be re-evaluated in a new Environment Analysis Report. Rescinding the decision halted further action or response to the appeals in the forest decision.

At press time, NCAP NEWS learned that Winema Forest Supervisor Chadwick had been transferred to the Forest Service regional office in Portland, ending his involvement in the project.



In Bellingham, Washington . . .

The following is excerpted from a longer article by Barbara Ford that was published in *Citizen Voice*, a newspaper published in Bellingham, Washington by the Organization for Citizen Action. Ford's article seems to us to be a good example of what people can do to inform themselves of chemical use in their area, and then demonstrates an appropriate beginning point for action. Her research also illustrates that pesticides and herbicides are not the problem of rural people only: she found that 2,4-D and other pesticides are used regularly by Bellingham schools, parks, and roadside maintenance agencies; besides by farmers who treat fields near residential areas. Finally, Ford's discussion of 'tolerance levels' in humans, as set by the EPA, shows that even a Congressional subcommittee investigating those tolerance levels found the guidelines "abysmal." — Ed.

Northwest Helicopter does aerial spraying for many Whatcom County farmers. 2,4-D is sprayed on the wheat fields, and most of the other aerial spraying on the cropland is done with parathion. Developments are being built up against some of the farmland, but Ron Watson of Northwest Helicopter said that development residents do not object to the spraying unless drift gets on their property, or unless they happen to be growing organic gardens.

2,4-D is used in the weed control program for all of Bellingham's public schools. Leo Kearney, supervisor of building and grounds, said that application is done in the summer when school is no longer in session. Still waiting for clearance from the school administration for this summer's program, Kearney now feels leary about using 2,4-D because of the serious questions arising about its safety.

John Ivory of Bellingham's Parks and Recreation Department explained that every year in the early summer, the mowed grassy areas in all Bellingham's parks are sprayed with 2,4-D to control the growth of weeds. The program is repeated in early fall if enough weeds have grown back.

Al McHenry, Superintendent of State Highways in the Whatcom County area, explained that his department spot sprays with 2,4-D to control roadside vegetation such as blackberries, brush, and noxious weeds. He said that they never spray closer than five feet to the bank of a stream that crosses under the highways. Other products that they

apply include Krenite, Krovar, Karmex, and Aminotrisol. Only once each year does the Bellingham-Whatcom Department of Public Health's Water Laboratory Division test our drinking water for the presence of organic chemicals such as herbicides and pesticides. Water Laboratory Director K.F. Kassube explained that these chemicals are present in our water, but that all of the water in the Whatcom County area has met the accepted tolerance level.

In dealing with toxic chemicals, is the accepted tolerance level that is determined by a regulatory agency actually the same as the accepted tolerance level of the human body? The Congressional Subcommittee on Oversight and Investigations published a report in December, 1978, entitled *Cancer-Causing Chemicals in Food*. The Subcommittee concluded that the Environmental Protection Agency (EPA) "(1) continues to approve tolerances for potentially carcinogenic, mutagenic, and teratogenic pesticides which result in residues in or on food; (2) has set tolerances for some of these pesticides without complete safety data; (3) has exempted some potentially dangerous pesticides from its tolerance requirements which end up in or on food; (4) uses an inadequate and outdated statistical base for setting tolerance levels; (5) often does not know what level of pesticide residue usually results from the use of a product; and (6) bases its approval of pesticides merely on industry-supplied safety data which often does not fully examine the potential hazard posed by the pesticide."

In sum, the Subcommittee concluded that "EPA's tolerance setting program is abysmal and needs a complete overhaul." Additionally, the monitoring and enforcement programs of the U.S. Department of Agriculture and the Food and Drug Administration were found inadequate and were not able to prevent foods with dangerously high levels of toxic pesticides from reaching the consumers' tables.

According to Rachel Carson, author of *Silent Spring*, the effect of a supposedly harmless chemical can be drastically changed by the action of another chemical, whether this takes place in the soil, water, or human blood. In addition, if a person suffers from certain types of liver damage, even slight enough to go unnoticed, the potential danger from the presence of various chemicals in his or her body may be greatly increased, in some cases by as much as 100 times.

A Citizen's Awareness of Pesticides organization is requesting an opportunity to discuss its concerns with the Bellingham City Council's Public Safety Committee.

. . . And in Eugene, Oregon

People in other urban areas are also taking the initiative to find out which pesticides and herbicides are commonly used on their public lawns and roadsides. NCAP NEWS reported on such efforts in Berkeley in our Fall, 1980 issue; Seattle is yet another city where such questions have become a focus. Following is an account of similar recent actions in Eugene, OR.—Ed.

by Michael Slattery

A chapter of Save Our eco-Systems (SOS) was formed in Eugene last August to protest the spraying of city parks with 2,4-D. Members drew up an informational leaflet, which produced a barrage of angry phone calls to Tim Ray, chief horticulturist of the City Parks Maintenance Department.

Members also learned that 2,4-D is sprayed on all school lawns in the Eugene 4-J School District. In the fall, Barbara Kelley moved to Eugene and merged forces with the chapter. They held a public meeting in Harris Hall on the school spraying, with speakers from S.O.S. and NCAP, which drew good media coverage. They intend to bring the issue of 2,4-D spraying before the school board this winter. Members obtained signatures and ideas from the audience at Harris Hall and showed the film *The Burden of Proof*. Allen McWayne of the Friendly Neighborhood re-

searched and presented information on the birth deforming capability (teratogenicity) of 2,4-D to the City Neighborhood Council; defending the use of 2,4-D on Eugene Parks was Tim Ray, horticulturist for the City Parks.

S.O.S. is also following spraying by Lane County and is contemplating actions opposing the spray programs of the Willamette Forest and the Eugene BLM. If you live in the Eugene area, they need your help. Or, if you need information or help in this area, they offer their assistance. Call Michael at 683-1579, Maureen at 685-9136, or Barbara at 484-2679.

Last summer Barbara Kelley was invited to Washington, DC to present the case against herbicide spraying to government officials. The invitation was arranged by the USDA Department of Environmental Quality for Barbara to meet with Rupert Cutler, who was Assistant to Bob Bergland, U.S. Secretary of Agriculture. Since Cutler resigned, Barbara spoke to Dr. Ned Bayler, who has replaced Dr. Cutler. She brought with her Dr. Phillip Leveque, an Oregon toxicologist. Also attending the meeting were Ed Johnson, Office of Pesticide Practices, EPA, and officials from the President's Council on Environmental Quality, the U.S. Forest Service, the Smithsonian Institute's Center for Natural Areas, the Veterans Administration, the Department of the Interior and others. Barbara and Dr. Leveque received invitations for further conferences and stayed on at the capitol to lobby and present literature on herbicides for several days.

Good Stuff from NCAP

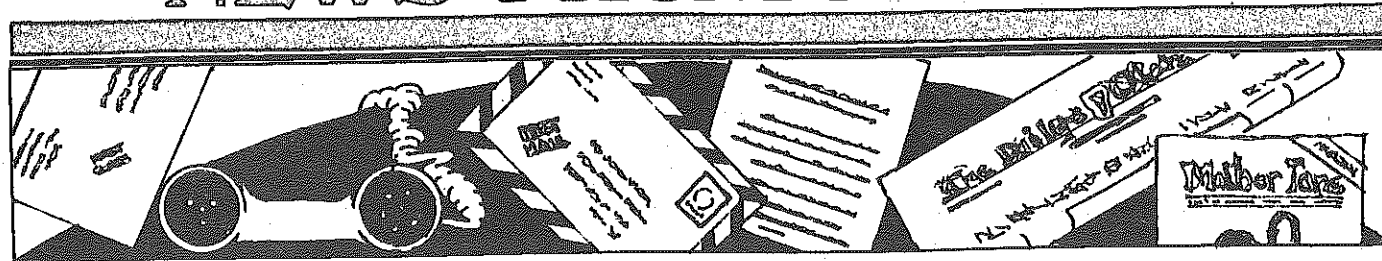
**DO NOT
SPRAY**

Post a No-Spray Sign! Green letters on white background, 8 1/2 x 11 inches. Adhesive back to put on sturdy cardboard or wood backing. As the ads say, "just perfect to warn off those pesky sprayers." One buck from NCAP.



Wear a No-Spray T-shirt! Comes with short sleeves, 100% cotton, white emblem on royal blue, forest green, & earth brown. Toddlers (sizes 2, 3, 4) are \$3.50 and come in blue only; Child sizes (S, M, L) are \$4.95 and come in blue and green; and Adult sizes (S, M, L, XL) are \$5.95 and come in a wide range of colors—please state first preference. Add 75¢ shipping charge for one shirt, or \$1.25 for three or more. Identify your concerns! Order from T-shirt Fund, 540 Kingswood, Eugene, OR 97405.

NEWS FROM AROUND



B.C. Power Company Charged with Falsifying Info on Herbicides

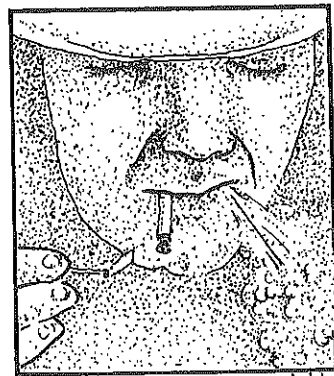
An Attorney General in British Columbia ordered a Royal Canadian Mounted Police investigation into charges that B.C. Hydro, a power company, falsified information on herbicide applications. The company was subsequently charged under the Pesticides Control Act for "intentionally making false statements to attempt to mislead the administrator."

According to the Cheeky-Dunsmuir Alliance newsletter, the company intended to spray 2,4-D on a right-of-way, and falsified information on its application. An example: The application asked the distance to the nearest water intake or well. The hand written reply said, "More than 500 metres." An investigation turned up 17 registered water intakes within 500 metres of the power line, one of which was the intake for a girls' summer camp located 50 feet from the power line.

Cigarette Additives Trade Secrets Even to Surgeon General

Surgeon General Julius Richmond said recently that about 300 additives are included in American-made cigarettes. He said that he has attempted to obtain information from the tobacco industry about which additives are in which specific brands, but that the industry has classified the information as trade secrets, and will not turn it over to him. He warned that some of the additives may cause tumors or cancer or be toxic, according to an AP story.

Richmond said further that he may ask Congress to grant his agency the authority to force the information from the industry if it is not forthcoming voluntarily.



Suit Claims Falsification of Vets Records

A new class-action suit has been filed on behalf of Vietnam vets which claims that the Veterans Administration, "prompted by Director Max Cleland and general counsel Guy McMichael, falsified the medical records of possible Agent Orange victims and failed to give them proper testing." According to a story in the *Oregonian* of Jan. 23, the suit was filed by New York attorney Victor Yannacone, who is representing the vets in another class-action suit regarding the effects of Agent Orange upon their health.

DC-6s May Spray Santa Clara

The U.S. Department of Agriculture is considering six consecutive aerial sprayings of Santa Clara County, CA, and parts of Alameda County with DC-6s in an effort to eradicate the Mediterranean fruit fly.

Malathion, an organophosphate insecticide, is one of the ingredients slated for the applications, along with an attractant which induces the fly to eat the poison.

Citizens and local governments have strongly opposed the USDA's plan and so far have succeeded in stopping them.

The opposition to the aerial spraying is based on four points:

- Malathion has shown laboratory evidence of causing cancer and birth defects
- The fruit fly is at present virtually inactive, so the applications may not work;
- Cold weather may entirely wipe out or reduce the fruit fly and its eggs, larvae, and pupae;
- Alternatives such as sterile flies, fruit tree stripping, and ground spraying may be safer and more effective.

Citizens groups are pressing for the USDA to intensify their efforts at fruit stripping, sterile flies and ground spraying. Local governments are becoming involved in promoting these alternatives. A deadline of Jan. 31 has been set to see if these efforts pay off.

California agriculture is up in arms over the prospect of a massive fruit fly infestation of the Central Valley this spring. The California Department of Food and Agriculture predicts at least \$400 million in crop losses and additional pest control costs if the fruit fly is not eradicated in Santa Clara.

—from the Coordinating Committee on Pesticides newsletter

CITIZEN ACTION

"Epic Victory for Consumers": Court Allows Suit Although Manufacturer Unidentified

Until December of 1980, a person who wanted to file suit against the manufacturer of a product that he claimed caused damage could not do so unless he could prove the identity of the *specific* manufacturer of the product. (For example, to be able to prove that Amchem Co., specifically, manufactured a particular chemical that caused damage, as opposed to any number of other companies that manufacture the same product.) This legal technicality has prevented countless numbers of suits, particularly in the areas of pharmaceuticals, when the product has often been consumed years before, and the bottles containing the product thrown away, leaving no way to prove a specific manufacturer.

Such was the case with women filing suit against the manufacturers of DES, which their mothers had taken during pregnancy to prevent miscarriage. The women, who are the daughters of those who took the drug, have been found to have an abnormally high rate of cancers associated with the reproductive system.

In such a DES case in California, a judge ruled in late December that the plaintiff may file suit against the multiple manufacturers of the product, a decision which is described in the *Wall Street Journal* as rocking the legal community since it "represents a radical change in product-liability law."

The *Journal* quoted a lawyer who represents drug manufacturers as saying that companies should expect increasing lawsuits as a result of the decision, and everyone agrees that it has far-reaching consequences. It "could include hundreds of chemical substances, agricultural products, and consumer items."

In making the decision, the California Supreme Court's majority opinion (which was a 4-3 split), was paraphrased by the *Journal*: "Technological advances and complex distribution systems result in many identical products that can't be traced to a specific producer." Justice Stanley Mosher wrote in the opinion, "The response of the courts can be either to adhere rigidly to prior doctrine, denying recovery to those injured by such products, or to fashion remedies to meet these changing needs."

The U.S. Supreme Court has declined to review the decision, which lawyers interpret in different ways. Some think it is a sign of support by the U.S. Supreme Court, because the consequences of the decision are so obviously wide-ranging. Others think, however, that the Court is simply reluctant to invade areas covered by state law, and that it expects the matter to be handled on a state-by-state basis. Still others note that the higher court may yet become involved in the future.

In the meantime, the *Journal* describes reactions to the decision as ranging from "an epic victory for consumers" to "a disaster for the legal system."

Tilth and OSU Host Soil Fertility Conference

Willamette Valley Tilth, an organization of gardeners, homesteaders and farmers who practice biological agriculture, presented a soil fertility conference in conjunction with Oregon State University. Entitled "Biological Management of Soil Fertility," the conference was held January 24, 1981, on the OSU campus in Corvallis.

The format for the conference was divided between morning presentations by members of OSU's Department of Soil Science and afternoon presentations by several experienced Willamette Valley organic farmers and gardeners. The president of Tilth and the head of OSU's Soil Science Department began the workshop with opening remarks. OSU professors addressed "Soils of Western Oregon," "Microbiology of the Soil" and "Soil Chemistry of Plant Nutrients." Afternoon presentations focused on the experience of various organic farmers, with an initial presentation on "Increasing Soil Fertility Organically" by a Cheshire grain and bean farmer. Conference participants then chose from three different small group sessions divided according to the scale of the grower's operation to further discuss this topic.



Man Acquitted of Blocking Spray

Ken Riley, a 39-year-old mill worker who lives near Birkenfield, Oregon, has been acquitted of obstructing government administration. Oregon State Forestry officials charged that Riley obstructed a 2,4-D operation by "locking a forest department gate with a padlock, parking his pickup on a forest department road and firing a rifle shot into the air," according to a story in the *Oregonian* on Jan. 24. The incident occurred last April, and Riley was charged with a misdemeanor.

Riley's trial took three days and was heard by a six-person jury in Clatsop County District Court. His lawyer, Richard Fischer, sued a "choice of evils" defense, according to the *Oregonian*, "in which he said a person is within his rights if he fears imminent danger." Riley's water supply was near land to be sprayed by helicopter with 2,4-D. Fischer said that Riley's activities did not obstruct the operation.

Dr. Ruth Shearer, a genetic toxicologist and cancer researcher from the Issaquah Institute near Seattle, appeared as a witness for the defense to testify that exposure to 2,4-D can be dangerous, even in small quantities.

If convicted, Riley could have received a \$1,000 fine and up to a year in jail.

Pair Awarded \$40,000 Over Spraying

Mike and Claire Waller, who lived on land in Coos County which was near forest land sprayed with 2,4,5-T and 2,4-D in 1977, just received \$40,000 in an out-of-court settlement for illnesses they claimed were a result of their exposure to the herbicides. According to the Wallers, the chemicals drifted onto their property and also contaminated a stream that ran through the sprayed property onto their property. Their drinking water came from the stream.

According to a story in the *Eugene Register-Guard* on November 27, the Wallers sued the firm that owned the sprayed property, the firm that applied the herbicides by helicopter, and the firm that manufactured the substances. They sued for \$2 million, but attorney Bruce Anderson, who handled their case, thought the settlement "significant." The companies did not acknowledge guilt, but Anderson noted, "I guess it's up to the reading public to decide why somebody would pay \$40,000 just to get rid of a case."

Douglas DuPriest of Eugene and Larry Sokol of Portland also represented the Wallers.

The legal basis for the suit was a claim of negligence under the state Forest Practices Act, and a claim of liability under a state law that holds companies responsible for injuries that occur as a direct result of herbicide use.



Demonstrators Block Spray Planes, Delay Spraying

During pre-dawn hours, forty people from all walks of life silently filed in front of a line of WWII Avenger dive-bomber spray planes that were scheduled to spray areas of New Brunswick, Canada with a pesticide to control the spruce budworm. People at the airport were taken by complete surprise, and the action did postpone the spraying for a day.

The citizen activists were members of the New Brunswick Health Defense League, which has organized "to defend our environment, including ourselves, from the onslaught of poison spray." They have dedicated themselves to non-violent acts of civil disobedience because they "believe that all other avenues to stop this spray programme are now exhausted . . . despite overwhelming scientific evidence of health hazards . . ." according to their policy statement.

Since the 1950s, a variety of chemical approaches to control the spruce budworm have been tried, but, particularly in the last 12 years, fenitrothion has been used. According to the N.B. Health Defense League, the chemical causes a viral nerve disease, Rye's Syndrome, which cripples children, and, in some cases, causes their deaths.

Hooker Chemical Sued for \$600 Million

According to an AP story in the Nov. 19 *Oregonian*, New York State Attorney General Robert Abrams has filed lawsuits totaling \$600 million, charging Hooker Chemicals & Plastics Corp. and its parent firm, Occidental Petroleum, with failing to prevent chemical waste seepage from three former dumps in Niagara Falls.

The suits are the first involving the dumps at 102nd Street, Hyde Park Boulevard and the S-area, which are less-known than the infamous Love Canal dump, but contain as much toxic waste, according to the state.

The federal court suits seek \$100 million for environmental damage and \$100 million in punitive damages for each of the three dump sites.

Couple Get Settlement in Mill Chemical Trespass

An Estacada, OR, couple settled out of court with Crown-Zellerbach in a suit in which they claimed chemical poisoning and consequent ill health from a mill near their home. According to an AP story, evidence showed that "chemicals carried by the air and spillage from a mill tank" near their home constituted continuing trespass.

Toxicologists testified that the couple, James and Delores Rice, had been poisoned by pentachlorophenol (PCP), and tetrachlorophenol (TCP), which have been used for years as a wood preservative.

Furthermore, Clackamas Circuit Court Judge Howard Blanding ordered Crown Zellerbach to stop the leaks by Jan. 20 or stop using the chemicals.

The amount of the settlement was not made public. The Rices plan to move, in spite of the court order. Their attorney, John K. Lowe, said they wanted to live in a place with clean air and quiet.



"When people are getting sick in their homes, our rights are being violated."

CHEMICALS IN THE ENVIRONMENT

200 Toxic Chemicals in Puget

Two hundred toxic chemicals that have been found in Puget Sound are "the tip of the iceberg," according to an October AP story in the *Oregonian* that discussed a series of lectures by the head of the Environmental Division of the National Marine Fisheries Service. Dr. Donald C. Malins, a Seattle University professor, is in the second year of a five-year study of concentrations of chemicals in the Puget Sound. Malins said that many of the cancer-causing substances entering the sound change chemically into toxic substances which cannot be detected with available methods and instruments. "We may be staggered by the magnitude of the problems," he was quoted as saying.

Furthermore, the chemicals found so far are not the kind "you encounter, clutch your abdomen, and fall down dead. They are insidious, acting over a long period of time until bang: there is a tumor in the animal or person," he continued.

Malin's studies demonstrated the presence of chemicals such as PCBs and petroleum compounds throughout the sound, although the heaviest concentrations are in industrial areas.

He found tumors and other diseases in bottom fish, and warned that if the situation continues unchecked, a problem may develop similar to those in the areas around Pálos Verdes, where less than half the marine animals are normal because of PCBs and other chemicals, and in the Chesapeake Bay, where fish have been adversely affected by the presence of chemicals.



Florida Scallops Dying by Millions

Scallops along Florida's Atlantic coast are dying by the millions. Officials from the state Dept. of Environmental Regulation, as well as private fishery experts, are searching for the cause, for fear that other marine life may be affected. Toxic "red tide" microorganisms have been ruled out, as was a mist that recently affected beachgoers, according to an AP story in the *Eugene Register-Guard*. "We're looking at something like pesticides, herbicides or heavy metals," said fishery pathologist Dale Meryman, director of the Fish Doctors Clinical Center, Inc., in Brandon, FL.

TCDD Found in Great Lakes' Gull Eggs; Canada Frustrated with U.S. Inaction

A Canadian federal report issued by Environment Minister John Roberts in late November said that Canadian scientists have found TCDD, the deadliest dioxin, in herring gull eggs in 12 locations in the Great Lakes, including Lakes Ontario, Erie, Huron, Superior, and Michigan. Researchers for the Canadian Wildlife Service say the chemical in the eggs probably comes from fish, which form the gulls' main diet, and that the fish become contaminated by the lake water.

Minister Roberts was quoted, in a Nov. 24 article in the *Vancouver Sun* that was carried by the Canadian wire service as saying that Ottawa would press the U.S. for an investigation into the sources of contamination. By Dec. 4, according to a follow-up article in the *Globe and Mail*, another Canadian paper, Roberts was "so frustrated by the lack of action by U.S. governments to clean up the Niagara area pollution that 'my officials are exploring the possibility of suing U.S. polluters in American courts.'" He said further that his government will continue to press the U.S. to meet its commitment, under the 1978 Great Lakes Water Agreement, to discontinue the dumping of toxic wastes into the waters "used by millions for drinking and fishing."

Articles in both the *Vancouver Sun* and the *Globe and Mail* hypothesized that the dioxin was present in the lakes as a result of the manufacture and/or the disposal of a variety of chemicals containing the dioxin. Several manufacturing plants are or were located on or near the Great Lakes, including Hooker, Olin, and Dow; two major dump sites that are known to be leaking dioxin are located near Lake Ontario.

The Canadian federal wildlife service had been collecting the gull eggs and freezing them for future research, but it was only recently that the equipment became available for the dioxin testing. The eggs gathered in 1971 had the highest concentrations of TCDD, at 800 parts per trillion; levels have declined in eggs gathered since then (44 to 64 parts per trillion in some locations, and 10 parts per trillion in others). According to the *Globe and Mail*, "however, the study shows that the dioxin levels remain high and says this points to continuing emissions of the deadly chemical by a manufacturing source."

To put the levels of dioxin found into perspective, the *Vancouver Sun* article noted that "it is known that even one part per trillion in water increases the cancer risk for people drinking the water," while the *Globe and Mail* noted that "the EPA says there is no safe level for the chemical." Minister Roberts said that his "concern is with the health and livelihood of the people living in areas where TCDD has been identified." There is concern also for the commercial fisheries of the Great Lakes.

The *Globe and Mail* further stated that according to recent studies by Environment Canada, "a large number of other chemicals like Mirex, polychlorinated biphenyls (PCBs) and chlordane are now everywhere in Lake Ontario. . . . The studies show that the pollutants come mainly from the U.S. side of the Niagara River."

Chemicals Poison Caribbean; Two Die

Two people and millions of fish died as a result of a "mysterious discharge of highly toxic chemicals" into the Caribbean north of Puerto Rico, according to the *LA Times-Washington Post* News Service on September 15. "Vast blankets" of dead fish from one of the world's richest fishing grounds washed ashore the Dominican Republic, and the government seized all fish in markets, shops and restaurants with warnings against eating seafood.

Dominican authorities said they found unmarked barrels of mercury, chlorine, sulfur and phosphates in the area, and said that since no accidents have been reported, they thought the dumping was deliberate. Analysis of the chemicals in the barrels coincided with analysis of the water, dead fish, and seaweed.

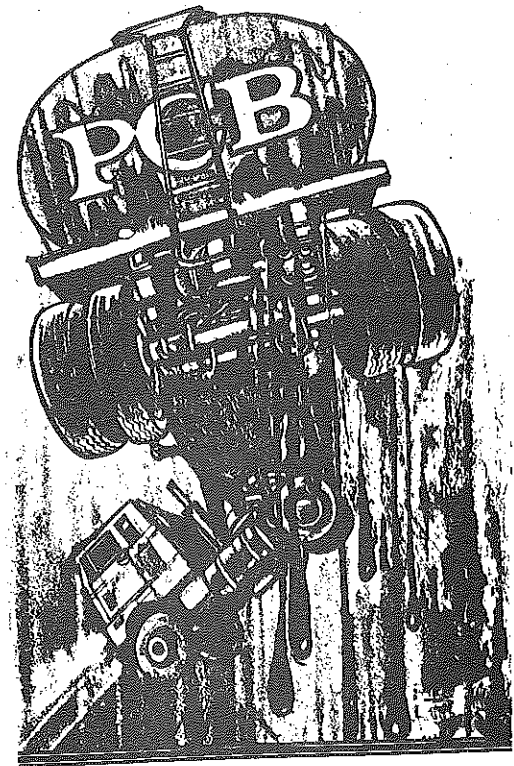
Imperial Valley Farm Children Have More Birth Defects

A study headed by Dr. David Schwartz of Boston City Hospital has demonstrated that children of Imperial Valley, CA, farmworkers are born "with shortened or missing limbs at a rate 13 times that of newborns nationwide," according to an AP story. Schwartz and his associates studied 2,500 infants over a five year period, and said they "think the use of pesticides in Imperial Valley needs closer scrutiny."

The valley is one of the prime agricultural areas in the nation, and Schwartz said the county uses the largest amount of pesticides in California, about three times as much as other agricultural areas of the state. He claimed also that there are pesticide dumps throughout the country, and that children "swim and fish in canals which contain pesticide runoff." He said further that there is not enough public money to enforce regulations.

Imperial County officials are challenging the study; Dr. Lee Cottrell, county health officer, said that although he hadn't seen the study, it was "another case of an outsider coming in and seeing what he wants to see." However, Dr. Ruth Heifetz, a professor of occupational medicine at the University of California at San Diego, and Linda Nuwsum, a medical sociologist, did the research with Schwartz. The county agricultural commissioner said that he hadn't seen the study results, but knew it was flawed.

The study was sponsored by the California Public Interest Research Group and financed by the National Science Foundation and the Shalan Foundation.



PCB Spills on I-5

In late November a transformer being hauled by a truck leaked PCB-laced coolant on Interstate 5 in the Redding, CA area, according to wire service reports. Apparently, a cap came loose from the top of the transformer, and some of the 1,600 gallons of PCB (polychlorinated biphenyl) splashed out.

Several motorists and the driver of the truck were "screened for possible contamination" at Mercy Medical Center in Redding. Authorities received about 12 calls from other people who feared they may have been contaminated because they were in the area. They were told to contact a doctor for screening.

Leaking Truck Not Licensed to Move Toxic Wastes

Chemical wastes leaked onto Interstate 84 near Cascade Locks in Oregon from a truck that was transporting the wastes illegally. The truck, owned by Northwest Tank Services of Seattle, was stopped when authorities noticed that some of the drums it was carrying were leaking.

Investigators called to the scene said the leaking chemical was separator sludge, a by-product of petroleum refining. The truck, on its way to the chemical dumpsite in Arlington, Oregon, was also transporting drums of PCB, but those were not leaking. The vehicle was not licensed to transport hazardous material, and the Oregon Public Utility Commission was to decide in late December if the firm should be penalized.

Tank Car Derails; Vinyl Chloride Leaks

After leaking highly volatile vinyl chloride for more than 24 hours, a derailed railroad car that had been carrying the chemical was finally partially plugged. At the time of the AP story, two more leaks still needed to be plugged. The mayor of the Ohio River community in West Virginia where the accident occurred said that life had returned to normal for residents, although how their lives had been disrupted was not specified.

LEGISLATIVE/REGULATORY

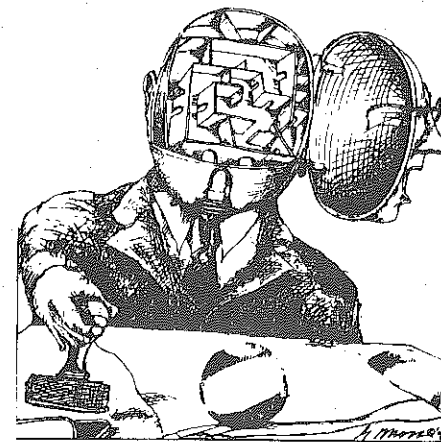
EPA Dump Regs Have Loophole

"The much-heralded, cradle-to-grave federal monitoring of toxic waste" has a significant loophole that may prevent the detection of tons of industrial toxic wastes, according to an AP interview with the EPA's chief hazardous waste investigator. In Nov., 1980, the EPA instituted their new regulations designed to monitor the travels of hazardous materials, but there's a flaw: the small industry that produces less than 1,000 kilograms (2,200 pounds) of waste per month is not affected. "They can and will use that loophole to get away with murder," said Hugh Kaufman, EPA's investigator.

In New England, for example, only 5,100 of 47,000 generators of toxic waste are considered large operations; all the others are small, and thus are exempt from the new regulations. "They can dump it anywhere," he said; "... a ton of poison will wind up in a town dump somewhere."

He said the EPA knew of the loophole, and that the people who wrote the regulations, as well as the "working-level technical people," were against the exclusion for small industries. "But pressure from the top, both political and corporate, killed the effort."

Some states are tightening up their own restrictions, even on the smaller operations. In Rhode Island, for example, no one is exempt from the regulations. Vermont has set its exemption at 220 pounds, while Maine says small operators must dump in licensed sites only.



EPA Regs Affect Oregon's Arlington Site

Chem-Security Systems, which operates Oregon's dump site for toxic substances at Arlington, expects increased deliveries as a result of the new EPA regulations governing the disposal of hazardous materials, according to the *Oregonian*. The dump is one of only two licensed hazardous disposal sites in the Pacific Northwest; the other is located in Idaho.

The Arlington site presently receives 1 million cubic feet of toxic wastes per year; 40 percent is generated in Oregon, 55 percent in Washington, and 5 percent from Idaho, Alaska, Hawaii, Canada, and several Pacific territories. The company operating the site refuses shipments from California, and will continue to do so.

Many regular landfill operations throughout the country will be drastically affected by the new EPA regulations, but Oregon's landfills have been legally unable to receive industrial waste without special permission, and will not be greatly affected by the new requirements.

A Washington Department of Ecology engineer, however, told the *Oregonian* that all or nearly all of that state's sanitary landfills have now stopped receiving toxic wastes. These shipments, which were never licensed or monitored, are now expected to be sent to the Arlington site.

Several Oregon industries will be affected by the new regulations, in that substances they handle are now classified as hazardous. For example, waste sludges of the electroplating industry and the wood-preserving industry, which have been disposed of at landfills and on factory sites, must now be sent to Arlington.

EPA Expected to be Curbed

According to an analysis in the *Sunday Oregonian* of Oct. 19, the Environmental Protection Agency is "under attack as never before, and staff members are worried that either Congress or the next president, or both, may attempt to curb its duties. Critics, led by Reagan, say EPA regulations extract too high a price for environmental protection."

Reagan claimed in campaign speeches that the U.S. is in the hands of "environmental extremists," and that the officials responsible for "no-growth" regulations have raised the cost of everything we buy. He promises to eliminate "thousands of unnecessary regulations" and put the EPA under the management of those who understand the problems of industry.

The AP analysis points out also that some members of Congress have "jumped on the anti-regulatory bandwagon," introducing proposals to provide a congressional veto over environmental regulations.

The Clean Air Act expires this year, in 1981, which will undoubtedly spark hot congressional debate. "Already the coal industry and others are massing their forces for a major assault, and they are picking up strong support in Congress. Leading the charge are lobbyists for electric utilities, steel mills, metal smelters and paper mills, four industries with hundreds of plants that don't meet current air and water clean-up timetables."

House, Senate Approve Scaled-Down Bill to Clean Up Chemicals

The House version of superfund legislation—designed to force the chemical industry to finance most of a multibillion-dollar fund to provide for the cleanup of chemical dumpsites and spills—was drastically scaled down by the Senate before its passage on Nov. 24. According to an AP story, the measure was stripped of "requirements that citizens be reimbursed for injuries or loss of income or property resulting from abandoned toxic chemical wastes." Furthermore, proponents of the bill in the Senate wanted a \$4.2 billion proposal, but compromised on a \$1.6 billion figure because of approaching congressional adjournment. The House had earlier passed a version with \$350 million more.

The bill, entitled the Comprehensive Environment Response, Compensation, and Liability Act of 1980, will be activated in three years, and will establish the \$1.6 billion fund to be paid out over a five year period. Taxes on chemical industry feedstock will comprise 87.5 percent of the fund, while the federal government will be responsible for the other 12.5 percent, according to the *Chemical Regulation Reporter*.

After Senate passage, the bill returned to the House and was approved on Dec. 3. It now awaits White House approval.

Pesticide Program Fails Audit

Key parts of California's pesticide regulatory program are failing, according to a just-released report of the California Auditor General.

"Certain pesticides currently registered have not been evaluated to ensure their safety and effectiveness for use in California," the auditors told the state legislature. They also found that the Department of Food and Agriculture (CDFA) may not be collecting all of the taxes it is supposed to levy on pesticide sales, and that reports of pesticide poisoning are not being adequately investigated.

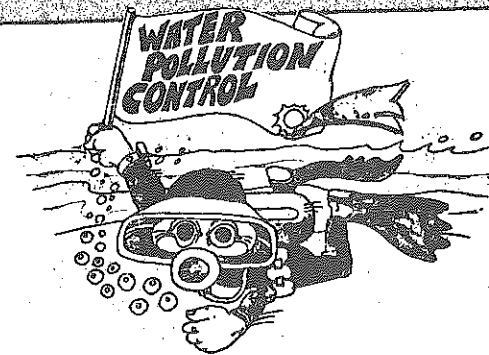
Review of the files on 25 pesticide products revealed that state agricultural officials have received and evaluated data on only three of them. Once approved a product is rarely reevaluated. As a result, CDFA may be allowing many pesticides to be used in California even though they may not be safe and effective.

Another major finding was that pesticide illness reports are handled much too slowly. The problem has hindered investigation of poisoning, and County Agricultural Commissioners are frequently unable to find violations or enforce safety laws as a result.

It was also found that CDFA is doing a poor job of collecting the mill tax on pesticide sales. Insufficient scrutiny of chemical company books is losing the state an estimated \$400,000 a year. The agency is moving so slowly in correcting the problem that at present rate it will take 20 years to review all pesticide sales records.

Copies of the audit "Review of the Calif. Dept. of Food and Agriculture Pesticide Regulatory Program P-934" are available from the Auditor General at 925 L St., Suite 750, Sacramento, CA. 95814 or by phoning (916) 445-0255.

—from the California Agrarian Action Project newsletter



State Regulations May Be Stricter Than Federal, Says Judge

A U.S. District Court judge has ruled against a suit filed by fifteen pesticide manufacturers seeking to overturn California pesticide regulations. Judge Lawrence Karlton ruled that California authorities may establish stricter standards than are required by Federal officials.

The decision dealt an all but fatal blow to the lawsuit filed by the manufacturers, the National Agricultural Chemicals Associations, and the Chemical Specialties Manufacturers Association. The chemical industry sought to overturn the stricter regulations proposed by the state to meet the California Environmental Act. In response to the suit and activities in the state legislature, the Brown administration already relaxed many of the regulations this past April.

—from the CCOP newsletter

Carter's EPA Exits in Flurry of Activity

During the last few weeks of the Carter administration, the EPA proposed a number of new regulations. Included in those regulations was a proposal for water pollution controls for the pulp and paper-mill industry that could cost \$920 million for equipment and production changes. The agency also issued regulations for the steel and coal industries that it says will "result in a 90 percent reduction in the 4,250 tons of toxic wastes discharged annually at iron and steel plants" according to an AP story. These wastes include such suspected carcinogens as benzene. Other regulations scheduled for release before Jan. 20 include pollution standards for diesel trucks and buses.

Norman Livermore, head of Reagan's EPA transition team, attempted to postpone the regulations so that they would carry over into the Reagan administration, but present EPA administrator Douglas Costle said he was acting under court orders. Costle was referring to a suit against EPA in 1976 by the Natural Resources Defense Council and other environmental groups that claimed that the EPA, although it had regulated "conventional" water pollutants such as oil and grease, had ignored requirements in the Clean Water Act to regulate toxic chemicals. According to the court agreement, the EPA promised an industry-by-industry review and said regulations would be forthcoming by 1981.

The proposed regulations are subject to public comment and further review before taking effect.

AGENT ORANGE

Vets Don't Want V.A. Study

Vetline-Hotline, a veterans' advocate group, has asked Congressman Philip M. Crane, (12th, IL) to submit legislation next year requiring that a scientific study be conducted by the Veterans Administration on the long-range health effects of exposure to Agent Orange be completed by an independent agency. Congressman Crane is Vetline-Hotline's Liaison to the U.S. Congress.

Testifying before U.S. Senator Alan Cranston, (CA) chairman of the Senate Veterans Affairs Committee on January 25, 1980, Gilbert Bogen, M.D., national president of Vetline-Hotline said, "Vetline-Hotline believes that neither H.E.W. nor the V.A. should be directed to conduct a study of the health effects of Agent Orange. Any epidemiological study of Agent Orange's effect upon Vietnam veterans should be done with the utmost dispatch, thoroughness, objectivity and impartiality possible. There is good reason in the minds of many people, including many veterans, to question the ability and willingness of the V.A. to conduct a thorough, immediate and objective study of Agent Orange."

Bogen cited a panel report of the National Academy of Sciences Committee on Toxicology that "the study might be interpreted as showing that an agency that studies itself can only be expected to give itself a clean bill of health, especially when compensation claims are involved."

Philip H. Vision, national legislative coordinator of Vetline-Hotline stated, "We plan to submit draft legislation to assign the responsibility for the Agent Orange study to an independent agency such as the National Academy of Sciences, the National Institutes of Health or the Center for Disease Control."

Agent Orange Class-Action Suit OK'd

A federal judge ruled in New York at the end of December that Vietnam vets and their relatives may sue the manufacturers of Agent Orange as a class action lawsuit, according to an AP story. The question of the actual liability of the manufacturers, since they produced the herbicide under government contract, must be decided by a jury trial, the judge ruled further.

U.S. District Judge George Pratt made the decisions in a complex legal battle that began two years ago, and said that the trial for liability for monetary damages by the manufacturers would begin "as promptly as possible."

The case had begun with the claims of a Connecticut veteran that exposure to Agent Orange had caused his cancer, which has killed him in the meantime. Plaintiffs' attorney Victor Yannacone had filed a motion that lawsuits involving thousands, and possibly tens of thousands, of plaintiffs be consolidated. Judge Pratt granted the motion.

National Conference on Agent Orange Scheduled

The National Veterans Task Force on Agent Orange and its member organizations are sponsoring the Vietnam Veterans Conference on Agent Orange on May 24-25, 1981 in Washington, DC. The conference will be geared toward veterans and their families, veterans' organizations, physicians and others in the medical field, mental health workers, and all others concerned with the Agent Orange issue.

The purpose of the conference is to provide the most current information on effects of Agent Orange exposure, scientific investigation, legislative action, legal actions, V.A. policy, and treatment procedures.

One of the major goals of the conference is "to help unite the efforts of various groups toward the development of viable resources to meet the needs of Agent Orange victims."

More information on the conference can be provided by the National Task Force office or by:

Ruth M. Schaffer, Conference Chairperson
Veterans Affairs Office
City University of New York
535 East 80th Street (Caldwell)
New York, NY 10021
Tel: (212) 794-5757 or 794-5758

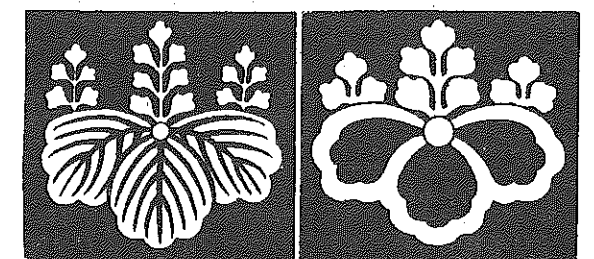
ALTERNATIVES

Sheep Control Tansy

An Oregon State University study suggests that "sheep can reduce tansy to acceptable levels, and that tansy is a satisfactory feed for sheep, providing protein for their diet in the summer, when other herbage is dry," according to an article in the *Capital Press*. OSU range and resources professor Steven Sharrow and Roseburg sheep and cattle rancher Wayne Mosher conducted the studies in 1977 and 1978.

The toxic weed poisons about \$1 million worth of livestock each year in western Oregon, but sheep seem to be resistant to its poisonous properties.

Sharrow noted also that 1,600 sheep were used to control brush on U.S. Forest Service land in the Alsea District in 1979. "It worked quite well," he was quoted as saying.





Beneficial Insects Produced

An insectary in Merced, California, is raising beneficial insects that are controlling pests and reducing insecticide use. Called California Green Lacewing, the company raises not only lacewings, but *Trichogramma* wasps, fly parasites, and alfalfa leafcutter bees as well.

"We send insects all over the United States and to several foreign countries as well," says Larry Bowen, the firm's founder.

The lacewing larvae are voracious, consuming aphids, citrus mealybugs, cotton cushiony scale, red spider mites, thrips and caterpillar eggs. The *Trichogramma* is a parasite. The adult lays its eggs in the eggs of 200 different insect pests.

The fly parasite, *Spalangia endius*, is released in cattle feed lots and dairies. It has proven to be far more effective than chemicals in controlling flies. The adult *Spalangia* lays its eggs in the fly pupae, and they consume the developing fly. At peak season, the insectary produces 12 million of the parasites every 10 days.

Bowen has also worked as a pest control consultant for the last 13 years. His pest management firm, Bo-Biotrol, Inc., advises cotton and orchard crop farmers. Recommendations include the use of cultural tactics and beneficial insects, and allowing natural controls to work. He also suggests the use of chemical pesticides, when appropriate, but feels that overuse of chemicals has depleted the beneficial insects, causing many of the pest problems suffered by cotton growers. Bowen estimates that over the years his growers have reduced their pesticide costs a total of \$15 million.

Information on how to obtain the beneficial insects can be obtained from Bowen at 54 South Bear Creek Road, Merced, California 95340, or by calling (209) 722-4985.

— from the CAAP newsletter

New Brush Cutter Developed

A road maintenance firm in Woodburn, Oregon has designed a new heavy duty brush cutter. The machine is similar to a flail mower, but can cut heavier brush, according to a story in the *Capital Press*. It can cut a four-foot swath of brush and trees eight to 10 inches in diameter, can reach 15 feet up and 15 feet out, and can trim up to 25 miles of roadside brush during a 10 hour shift.

Norm Toepfer, owner of Woodburn Backhoe, which developed the device, said, "No one in the U.S. makes a brush cutter like this, so we decided to give it a try. We like the product because people can clear roadsides without resorting to chemical sprays. . . . It will clear most logging roads and right-of-way without any problem."

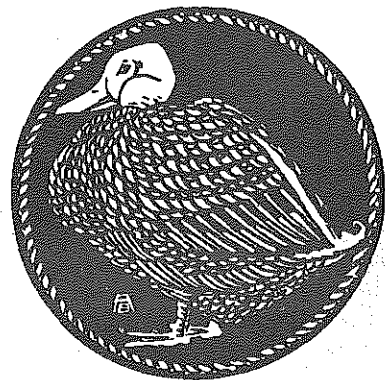
The cutting mechanisms are attached by hydraulic boom to a 96 horse-power tractor. The operator controls movement of the cutter from the enclosed tractor cab. Toepfer estimates the cutter unit would market for about \$18,000 plus the cost of a tractor. The firm is trying to generate interest in the machine to see if it will sell. Toepfer says it can do the work of an entire crew.

Meanwhile, the firm is taking job orders for the cutter, and so far has lined up work with Weyerhaeuser and Crown-Zellerbach, as well as some work in Portland and Bend.

Oregon Gypsy Moth Infestation?

According to an article in the *Oregonian*, the voracious gypsy moth that eats the leaves of hardwoods as well as firs, pines, and fruit trees, may be on its way to Oregon. Agriculture officials have set out traps in the Portland area to detect the problem as soon as it develops. That area seems to have been selected because the moths were found last year near Lake Oswego.

Oregon Dept. of Agriculture entomologist Pete Larson said the most immediate danger would be the shade trees of Portland, but that the insect could spread to orchards and forest lands. He said further that insecticides have primarily been used for control of the problem in the East, which has been plagued for years, but that it would be difficult to obtain approval to spray pesticides in Portland. He noted also that some alternatives to chemicals have been tested, and that "these may give Oregon officials a method of controlling the moths without endangering human health," according to the *Oregonian*.



TRENDS

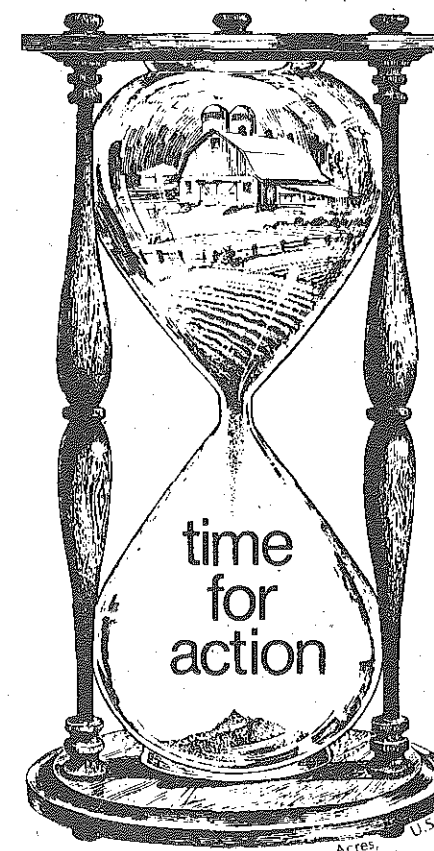
Ag Dept. Warns of Increasing Agri-Business

In a report entitled "A Time to Choose" released on Jan. 13, 1981, the U.S. Dept. of Agriculture says that "in only a few years" food production in the U.S. will be in the hands of a few "superfarms" unless immediate steps are taken to change present federal farm policy. An AP story quoted the report in part: "It seems fairly certain that the future economic climate, combined with a continuation of current policies and programs, will continue and even accelerate the shift to large and super-large farms."

The article also noted that project coordinator Susan Sechler said that the study showed that the trend toward huge agribusiness concerns has been "going on faster than had been thought previously."

The report is a 210 page summary of a much larger research document that will be released in stages. It was the result of two years of research, 10 public hearings, and 10,000 pages of testimony. Ag Secretary Bob Bergland said the document would have been used "as a sort of textbook for the development of food and agricultural policy for the second term," had Carter been re-elected.

The report noted that, using 1978 figures, 2.4 percent of the nation's farm units accounted for 39.4 percent of the nation's gross sales.



Poll Shows Californians Worried About Food Grown with Pesticides

The Gannett News Service of California reported that in a poll of Californians, two-thirds of the state's adults believe that the use of chemical pesticides by California growers presents a danger to their health. Of those who believe that pesticides are a health hazard, four-fifths said they are willing to pay more for fruits and vegetables grown without pesticides. The poll was conducted by Communications Research Associates, and the GNS article noted that "It is estimated that the opinions of California's entire adult population do not differ by more than three percent from the poll sample."

The article pointed out that Californians hold such beliefs, despite the fact that the state has the most stringent pesticide regulations in the country. In 1980, the Brown administration won approval for a new \$7 million program to increase the efficiency of procedures governing pesticide permits, monitoring, and labeling. Furthermore, the Dept. of Food and Agriculture has initiated a \$390,000 program to detect pesticide residues.

Organized Crime/Toxic Dumping Linked

A government informer testified before the House Commerce investigations subcommittee on Dec. 16 that organized crime has moved into the business of toxic waste disposal. Harold Kaufman, who worked for 18 months for a New Jersey strike force against organized crime, said that, in New Jersey, the disposal of solid wastes had already been controlled by "the mob," and that it was easy to take on the disposal of toxic materials, which is much more profitable.

Since hazardous materials must be neutralized or isolated, disposal companies charge up to 20 times more to handle them. However, Kaufman said, many simply store the chemicals on a vacant lot somewhere, dump them indiscriminately, or mix them with ordinary wastes and bury them in a landfill, according to an AP story.

The Attorney General of New Jersey testified that a company could charge thousands of dollars for the safe disposal of one 8,000 gallon tank truck full of liquid toxic wastes, but that it took only eight minutes to dump the contents on a roadside somewhere.

Extortionists Threaten to Poison with Herbicides

Extortionists demanding \$10 million from Caesar's Tahoe hotel-casino in late October said they would poison the club's water supply if they didn't get the money. Notes led authorities to a sample of poison sprayed on a bathroom ceiling which was analyzed as "a mixture of a herbicide," according to an AP story, "possibly 2,4-D with Silvex and barium cyanide." The casino's water was tested and proved uncontaminated.

Army Used 2,4,5-T in Alaska in 1980

2,4,5-T, the controversial herbicide partially banned by the U.S. government in 1979, was used on 80 acres of land at Fort Greely and Allen Air Force Base, Alaska, in April and May of 1980, the Seattle office of Friends of the Earth has learned.

Ironically, the applications took place almost at the same time that Maj. Gen. William S. Augerson testified (Feb. 25, 1980) on behalf of the Defense Department before the U.S. House Committee on Veteran Affairs, saying that the American military had halted all use of 2,4,5-T in 1971.

After the herbicide application was discovered by the Alaska Department of Environmental Conservation, an exchange of letters led to the state obtaining written assurances from James W. Hostan, Chief of the 172nd Infantry Brigade's Environmental Office, that:

- "The use of 2,4,5-T was stopped at Army installations in Alaska on 15 July 1980."
- Public access to the area would be restricted (state officials had feared berry pickers might enter some of the areas).
- Pesticide applicators from Forts Richardson, Wainwright and Greely would attend state-sponsored classes and obtain required certifications before applying other pesticides.
- Army officials would transport remaining stocks of 2,4,5-T (1,200 gallons) out of the state.

Alaska investigators filed no charges against military officials involved, even after noting that the herbicide was not applied by a certified applicator as required by the pesticide's label; and decided that no public mention of the incidents would be made. According to one Alaska official, U.S. EPA employee Stan Brust had approved the spray projects.

Army and Alaska officials agreed that restricting access to the area would be sufficient to protect the public health. But one of the applications was to a large asphalt apron at Allen AFB where personnel would be exposed to volatilized fumes; and a map given to the state by the Army indicates that other applications were in an area that drains toward the main base and its water reservoir. Two applications were apparently made directly into a tributary of Jarvis Creek, which flows immediately adjacent to the most heavily populated portions of both bases.

Ernst W. Mueller, Commissioner of the Alaska DEC, said in a letter to Gil Zemansky of Friends of the Earth that the nation's pesticide law "does not expressly grant state authority over actions of federal agencies . . . ; therefore the department cannot take any legal action against the Army."

However, in a July 16 letter to the Army's Hostman, the state's investigator, Dr. Bill Burgoyne, said, "I believe Mr. Brust has now briefed you on the fact of this Department's responsibility for pesticide safety and that its authority to protect our environment does not end at the gate of a military base or at the limits of other federal property."

No results of water sampling for herbicide contamination were included in government correspondence received by Friends of the Earth and NCAP.

2,4-D UPDATE

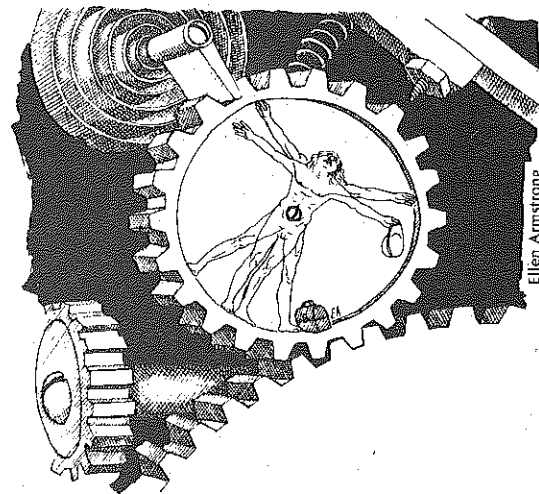
EPA Notes Human 2,4-D Exposure

A report by the EPA summarizes results of a recent search of the Pesticide Incident Monitoring System's records for reports involving 2,4-D. "At the time of the search, the files contained 33,625 incident reports covering the period from 1966 to March 1980; of these, 1,001 involved 2,4-D." Of those, 600 involved 2,4-D alone. The other 401 reports involved 2,4-D in combination with other ingredients.

In the 138 incidents involving humans and 2,4-D alone, there was one fatality; 18 persons were hospitalized, 92 received medical attention and 46 were affected but not treated. In the 195 incidents involving human exposure to 2,4-D in combination with other chemicals, there were three fatalities and 25 hospitalizations.

Incidents are broken down by type of use, type of damage and whether or not other chemicals were involved.

The report is entitled *Summary of Reported Pesticide Incidents Involving 2,4-D*, Pesticide Incident Monitoring System Report No. 283, Health Effects Branch, Hazard Evaluation Division, Office of Pesticide Programs, Environmental Protection Agency, March, 1980.



Bergland: 2,4-D's Effect on Trees Unknown

Secretary of Agriculture Bob Bergland was quoted on the front page of the *Capital Press* as saying, "We know that 2,4-D is a growth regulator and will destroy crop yields if applied too late, but we're not sure how 2,4-D affects trees. . . . We must calm the emotions on these matters by using research."

His comments were made while on a visit to Oregon in late October. Bergland also described himself as a conservative on the issue of licensing agricultural chemicals. He said that more research is needed. "We need (chemicals), but we must research their long-term effects."

Researcher Says 2,4-D Breakdown Intermediates Toxic

In an August, 1980, Prescott, Arizona newspaper, 2,4-D researcher Ruth Shearer wrote a lengthy letter to the editor in response to a letter that had been previously published about the toxicity of 2,4-D. Her concluding two paragraphs are worthy of note:

"(The author of the letter) also repeated the common half-truth that '2,4-D degrades—in the soil within two to four weeks.' This is true only of the first step of seven or more (by various pathways) and ignores the fact that the first degradation product (2,4-dichlorophenol) is more fetotoxic and carcinogenic than the 2,4-D itself. I have been unable to find any information on the environmental degradation rate of 2,4-dichlorophenol or any evidence of testing for long-term toxicity of any of the degradation intermediates.

"Since publication of my 2,4-D literature search by the Municipality of Metropolitan Seattle last January, I have been besieged with inquiries from 2,4-D poisoning victims and their physicians and attorneys all over the United States and Canada. There is a clear poisoning syndrome, and it includes most of the complaints of the Agent Orange victims which are usually blamed on the dioxin component of Agent Orange in order to 'pass the buck' away from commercially profitable 2,4-D."

Canadian Scientists Find Dioxins in 2,4-D Samples

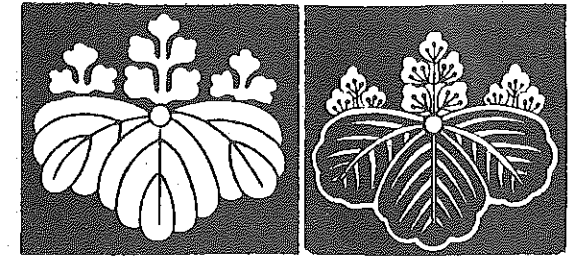
Canadian Agriculture Minister Eugene Whelan announced to the public in October, 1980, that scientists had found previously unrecognized dioxins in 2,4-D samples. Of 26 samples taken from a "broad cross-section of agricultural and domestic products now on the market," 12 were found to contain dioxins. Scientists in Canada's food production and inspection branch did the testing, using the latest available equipment.

It has been generally believed that 2,4-D was free of dioxins, which is one of the principal arguments used by proponents of the herbicide in the continuing controversy over its safety.

According to an article carried in one Canadian newspaper, there are about 75 kinds of dioxin. The most toxic of these is TCDD, which some scientists say is the most toxic substance ever manufactured. It was present in 2,4,5-T, which the U.S. government has suspended. TCDD was not found in the 2,4-D samples, although three other kinds of dioxins were. The concentrations found in the samples ranged from five parts-per-billion to four parts-per-million. (An article in the Regina Saskatchewan *Leader-Post* notes that "as little as five parts per trillion of TCDD causes cancer in laboratory animals.")

The *Toronto Globe and Mail* said that "the government's choices of alternatives include banning the product or restricting its use," according to a toxicologist who is head of the agriculture pest control products section. The discovery of the dioxins came just months before 2,4-D is scheduled for renewal of registration in Canada.

The *Globe* noted further that citizens' groups in Nova Scotia and British Columbia have legally challenged the



National Park Service Halts 2,4-D Use

The U.S. National Park Service has discontinued the use of 2,4-D in its 325 parks and recreation areas.

Park Service Director Russell Dickenson ordered all superintendents in a memo to stop using 2,4-D immediately. According to a story in the *Washington Post*, "Future use is to be allowed only if the superintendents convince their regional directors that no alternative methods are available to accomplish indispensable control."

Spokesman Duncan Morrow said the action came in response to environmental groups, many of them based in the capital, who argued that the herbicide causes spontaneous abortions, bleeding of fetuses and birth defects. He said the evidence is not sufficient to make a definite judgement, but that "it's better to err on the side of conservation and not use a potentially dangerous chemical unless we can find that our fears are unfounded."

use of 2,4-D, fearing cancer and birth defects.

Minister Whelan said his "main concern is about the safety of all pesticide products used in Canada." His department is now engaged in assessing the implications of the findings, and he expects to reach a decision "before the next growing season" about how the uses of 2,4-D may be affected.

Meanwhile, in December, the research coordinator for the agriculture department called for all the provinces to submit reports on the economic value of 2,4-D. The official, Walt Saidak, told the Canadian press that he estimated, without seeing the data, that 15 percent of the grain yield would be lost without the use of 2,4-D. He said further that continued use of 2,4-D "is extremely critical" if Canada is to increase its grain production. Saidak is on the steering committee of the department of agriculture that will review the data and make a final report to the government.

Canada uses about eight million pounds of 2,4-D per year, which accounts for about 25 percent of all the pesticides sold in the country. According to the *Leader Post*, it is the biggest seller among pesticides now on the market in Canada.

The president of the Canadian Agricultural Chemicals Association, in response to the findings of the dioxins, said that the chemical industry felt certain that a ban on 2,4-D would not result. "The dioxins found in 2,4-D are 15,000 to one million times less toxic than TCDD," he said.

The government, however, seems to feel there is very little information available on the types of dioxins involved or their toxicity.

NWFWA:

New Directions for Forestry Workers

by Fred Miller

Four NCAP groups (Hoedads, Mudsharks, Pacific Rain, and Marmot) are worker-owned and operated reforestation companies. They also belong to the Northwest Forest Workers Association (NWFWA). NWFWA is a four-year old association formed to enhance the position of forest workers in their communities and in the reforestation industry.

From a membership of a few companies at its founding, NWFWA now embraces 20 companies in three states, representing about 1,000 workers, or about one-fifth of the reforestation workforce.

In an industry that is rapidly developing as an economic force of some consequence in the Northwest, NWFWA has played an important role. It has helped raise the standards of work to better quality and has protected worker rights, particularly in the areas of health and safety. In addition, it has helped professionalize the workforce by expanding the roles of treeplanters to include other reforestation work such as brushcutting and thinning, cone collection, erosion control, animal damage control, fence building, stand examinations, and vegetation surveys. The gains NWFWA has made have benefited the entire reforestation workforce.

Two of the most pressing issues that NWFWA faces are 1) to get recognition that pesticides encountered in their work are truly an occupational hazard, and 2) that substantial numbers of jobs are not being developed because of a mistaken decision to base forest management programs on increased chemical use.

NWFWA has run into the same problems that other groups of workers, such as the Oil, Chemical, and Atomic Workers Union, and the United Farm Workers Union have had when trying to get accurate information about the

identity of chemicals they are exposed to and when they are being exposed.

It has been a time-consuming and costly effort. NWFWA members have spent thousands of dollars trying to get job protection. At the same time, they have been told repeatedly that there was nothing harmful about their exposure and to quit worrying about it. They have had problems trying to get federal officials to divulge basic information about the number of acres that had been sprayed in certain areas, whether spray treatments had been before or would be after planting, and the specific identity of chemicals that had been used on units they have been scheduled to plant.

As for the issue of job availability, it is serious in a different way. Public forest managers refuse to accept local economic development as part of their forest planning. And, by their refusal, they are directly hindering the development of the reforestation workforce and also the development of stable economies in those communities totally dependent on forests for their existence. Not by conspiracy, but by inaction and lack of vision, public forest managers are dooming rural economies to extinction.

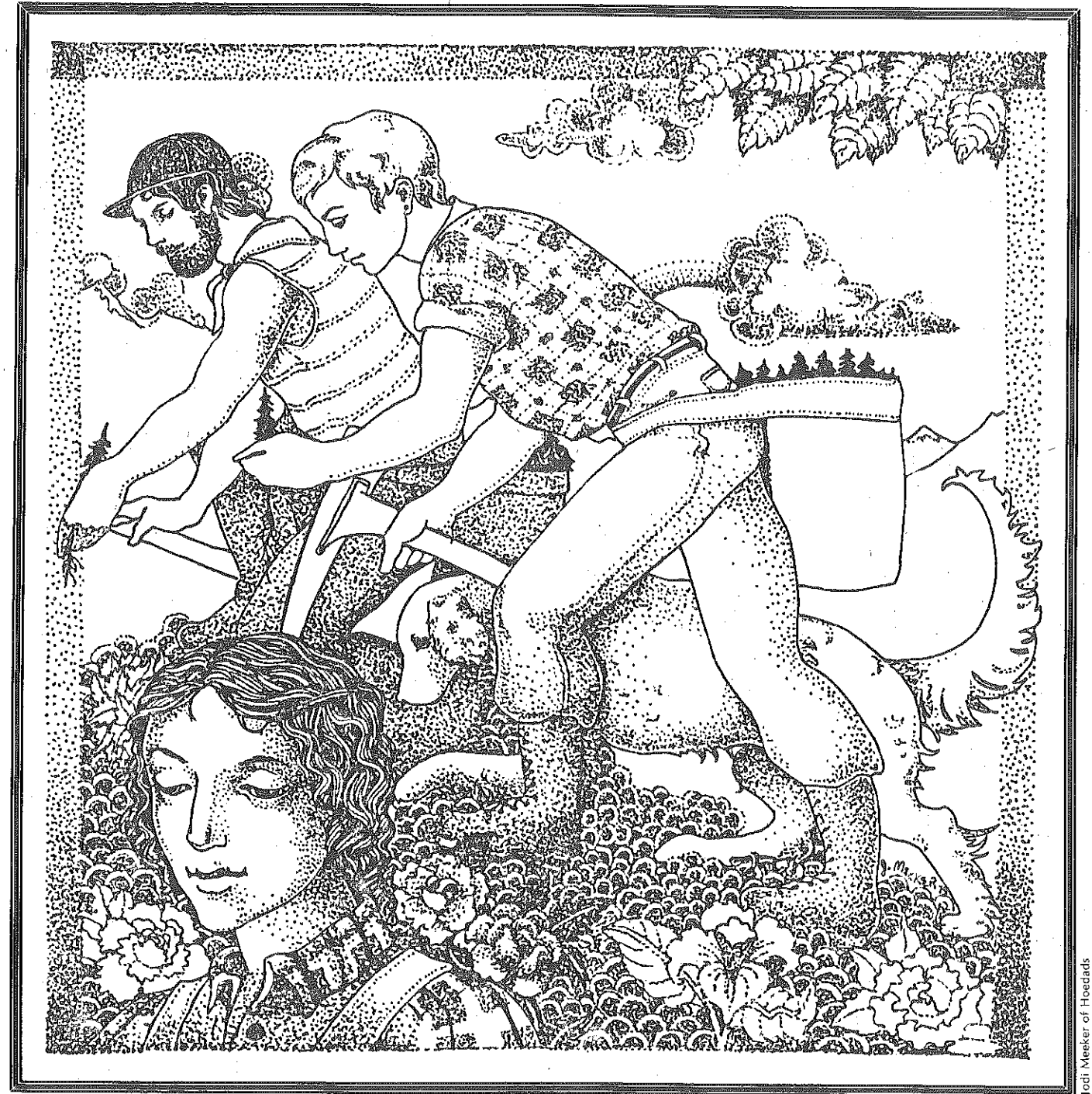
The problems of economic development are the direct responsibility of those in the national and regional forest offices. They are the people who should understand that economic conditions have changed, that the timber economy has changed, and that the future of forestry in the public sector cannot continue to be aloof from the needs of the majority of people in the Northwest.

A large percentage of reforestation work is done on public lands. It is critical that forest practices stimulate a stable, dependable economy in rural and urban areas in the Northwest. Practices that create jobs, or practices that reduce jobs have to be looked at in a larger sense than the narrow, tip-of-the-nose economics that is now prevalent.

At their recent regional conference in the fall of 1980, NWFWA adopted a series of proposals dealing with their work in the woods. NCAP NEWS is printing some of their resolutions, as well as excerpts from a preliminary statement on forest research, because they offer specific ways to resolve some of the problems that have plagued public forest management for several years.

* * * * *

"Within a six year period NWFWA wants to see herbicide use cut by 75 percent from current use levels, by the Forest Service, BLM, State of Oregon Forest Dept., and the Department of Natural Resources. We think an appropriate timetable would be a 50% reduction the next four years and a further 25% reduction the following two years. We acknowledge there are no easy ways out of the present controversy, which has interrupted the ability of the agencies to carry out their mandated responsibilities of managing the public's resource. The herbicide controversy will not go away, and it has the very real potential for further escalation of violence and irreparable harm to the populace of the Northwest. The public agencies have literally spent millions of dollars trying to deal with this problem. The person hours and resource time devoted to trying to mitigate the effects of a very unpopular forest management technique has wasted the productive capacity of the agencies. For the most part, this has been a massive waste of the public's money. We strongly urge that the agencies turn their attention to the necessary programs of getting reforestation efforts accelerated and to put people to work. We



Jodi Meeker of Hoedads

see it very necessary that public land is not managed in the same manner as private land. The end goals are significantly different.

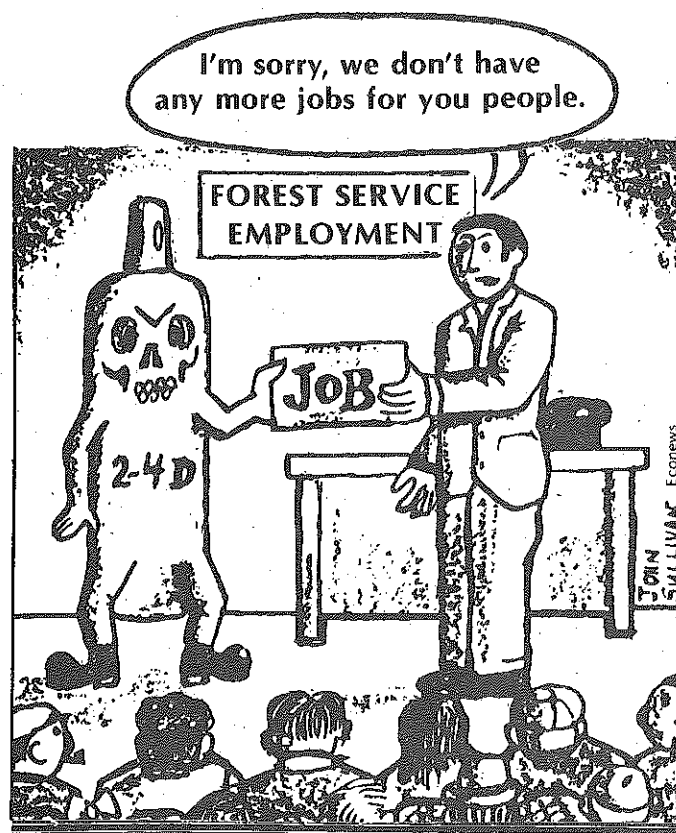
"(USFS) Region 6 has acceded to our requests to require the herbicide history for any unit up for bid. We want that done for all BLM, Oregon State Forestry, Department of Natural Resources, and other Forest Service Regions. That information should be part of bidding specifications and unit information in order for contractors to make the best possible bid.

"Bi-lingual notices for aerial application of any herbicide should be posted in the vicinity of the target areas for 15 days previous to spraying and dated to remain for 60 days thereafter. Additionally, residents of any affected water-

sheds should be notified via public announcement through appropriate mechanisms.

"All agencies should coordinate management practices to avoid any unnecessary worker exposure to herbicides. In establishing timetables for management practices, the welfare of forest workers and their possible exposure must take precedence over management objectives. Several times in the past year our companies have been forced to appeal a spray program timed just prior to unit entry by treeplanters. Any practice that is done without due regard for our safety will be protested in the most severe manner available.

"Re-entry guidelines of at least seven months should be established for all herbicide sprayed units. While we have



previously requested re-entry guidelines of one year, we realize that would negate some of the management practices performed. We wish to protect our members while not interfering in the agencies' ability to carry on their management duties. The root of the problem is related to the coordination of management activities or the lack thereof, by agencies. Until there is better communication within agencies, this will continue to be a problem. We urge agencies to integrate their unit planning.

"The Forest Service and BLM should acknowledge SCP and OSHA regulations concerning a safe work environment and begin treating herbicide exposure as a health hazard to workers. This includes those government workers burning slash.

"The public agencies should not use or purchase any chemical for which full disclosure of registration studies has not been made public or available to the public by the manufacturer. Chemical companies have to assume the burden of proof for the safety of their products. Confidentiality or trade secret status is not acceptable to us, considering the potential hazards to workers and the general public that have been detailed in the past several years. Using chemicals that have clear evidence of possible harm in the environment only serves to point to the need for full disclosure. Federal agencies have an obligation to spend the funds of the public wisely. We will work through our congressional delegation to lobby for prohibitions on chemicals that do not have toxicology information fully disclosed.

"We also recognize that the Forest Service and BLM are using information in their environmental statements that have been prepared by chemical corporations without mentioning the trade secret status of that information. Relying on information that is not accessible to the public negates one of the principal reasons for a statement. If the

information cannot be checked there is no way the veracity of reports can be ascertained. The agencies should cease and desist from this practice.

"We reiterate our call for the Forest Service and BLM to commission a joint independent epidemiological study of their workers that are exposed to herbicides. This study should include persons working on spray projects, entering treated areas, or burning herbicide-treated slash. Detailed medical information is desperately needed to accurately determine the extent of worker exposure. It is in the best interests of the agencies involved to take the initiative in evaluating hazards to their own workers and to those who perform contract work on public land."

* * * * *

"Research is not an area of forestry that should remain abstract and academic. While it is apparent that we do not have the resources to do a full scale review of research problems within public agencies, it is no secret that some of the research being done is to substantiate an existing predilection, rather than an investigation of vegetation management in an all-sided way. We take exception to the track record of those researchers who have confined themselves to a very narrow focus when dealing with vegetation management. This is more a problem with the administration of research programs and the initiation of projects at higher levels, rather than with the individual researchers. However, we note that there remain people within research stations—as in the agencies proper—that have blinders on when it comes to examining problems, and they remain closed to new and more integrated approaches in dealing with problems. We feel that field foresters, those people who have to apply the results of experimental research, have not been served as well as they could. Consequently, they bear much of the controversy for methods that they have relatively little choice in using. Forestry has to be practiced on a sound, scientific basis, but it cannot remain a mechanical approach, as has become the case with vegetation management and reliance on forest chemicals. Site specific forestry is not a catchword, but rather defines an approach to forestry that locates problems at their source, rather than in a broadcast manner. North slopes are not south slopes.

"We want to see at least one research scientist at Pacific Northwest Range & Experimental Station who will work in vegetation management without chemicals and who will develop information on integrated pest management in a forest context. That person should have an adequate budget to carry on vital research.

"We want to see additional research monies budgeted for PNW. We will help work toward convincing the appropriate congressional people that it is desperately needed.

"We want to see much more input from field foresters in the identification of problems and to aid, if necessary, in research that will have field application. We do not want to see pet projects of upper management people become the basis of research projects that have little relevance to the problems faced by foresters and workers in the field.

"We want to see a firm commitment from the Office of the Deputy Chief for Research to aggressively get research funds and to back a thorough review of existing vegetation management research."

All-Species, All-Age Forest Management

A Successful Approach for Small Woodlands Which Has Potential for Application on Public and Industrial Forest Lands

Small woodland owners are often advised to undertake "intensive management" technologies currently in vogue with government agencies and lumber companies. The wisdom and purported economy of those methods has become controversial even for large operations; for the small woodland manager, they are even less feasible.

Orville Camp owns and manages 160 acres near Selma in the Illinois Valley of Southwest Oregon, where regeneration of coniferous forest is often extremely difficult. In less than 15 years, he has turned property that was considered of little worth into productive multiple-use woodland.

Camp feels that the people of the Northwest, living amidst an apparent abundance of timber, are not recognizing what is happening on forest lands, and, therefore, appropriate plans for the future are not being made. His experience refutes the need for "bigger is better" techniques that adversely impact forest land, vegetation and wildlife, as well as future harvests. He feels management methods must scale down to address all these concerns and to provide opportunity for satisfying, self-sufficient work.

The following article has been compiled from presentations Camp has made to various organizations and at the June forum "Forestry for the 80's" at Ashland, Oregon.

Supply and Demand

Timber is the Northwest's leading economic resource and generates its major employment, but the commercial inventory has decreased drastically within the last century, while demand has increased and will continue to increase. Within our own lifetimes, we have seen the end of the concept of "endless supply." Reductions of harvest levels are predicted for the future, and wood quality will change due to shorter rotations. The Northwest's magnificent forests have been an attraction to both residents and tourists. Camp's real estate experience makes him cognizant of the increased value that a forest setting adds to property, both commercially and aesthetically.

Forests' Influence on Other Resources

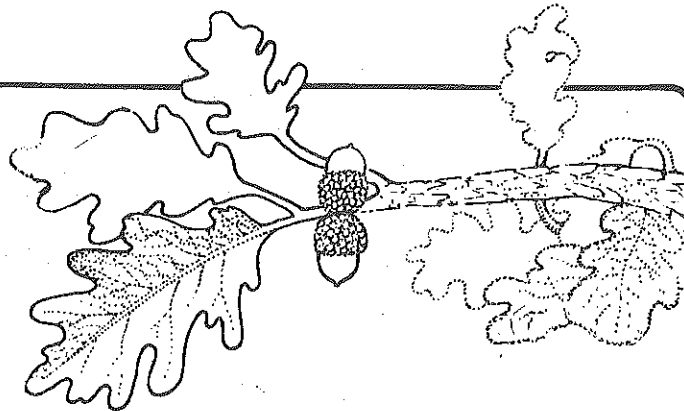
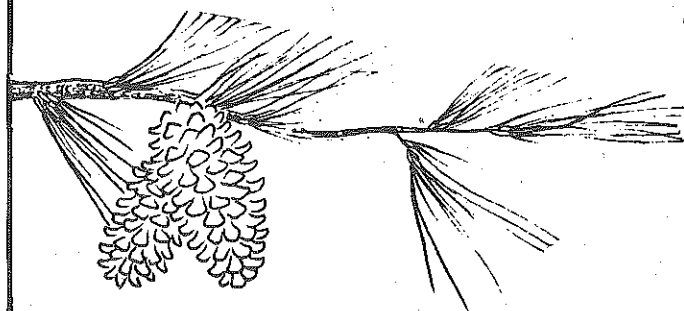
The protection of other vital resources is at the top of the list of needs that Camp considers. Quantity and quality of water is directly dependent on forest management; air quality is also significantly affected by forests and forestry practices. Forests can be a renewable energy and materials source only if they are not depleted and ruined. Past and present management practices must bear heavy scrutiny because of the increasingly obvious degradation of all these resources, and of soil and wildlife.

Rehabilitation measures are tremendously costly and often not very successful. Camp advocates and uses a preventative approach. Although no single element of his management system departs from methods already recognized, its combination of methods and timing are its distinctive features. He was practicing an integrated systems regime before the term "Integrated Pest Management" appeared in agency directives and handbooks (where, unfortunately, it still remains largely on paper).

The Camp System

Camp's system incorporates the following goals:

- Maintenance and improvement of both the quantity and quality of forest products on a sustained yield basis.
- Timely harvesting with minimum impact on the environment.
- Maintenance of natural micro-climate and plant and animal communities, avoiding rapid changes in trees' environment.
- Minimization of energy-intensive technologies and fuel use.
- Continuing research and education on the diversity and complexity of management situations. (Camp believes that proper analysis of the research cannot be over-emphasized.)



Of foremost importance, Camp manages for all ages and all species by crown cover. Whenever possible, harvesting is done while the sap is down in order to minimize damage to surrounding trees. Overcrowded and diseased material is promptly removed, resulting in a decline in pest problems. His harvest is aimed at the poorer or mature trees, leaving the best for reproduction. Both hardwoods and softwoods are marketed, and the smaller material is cut up for firewood; remaining branches under two inches in diameter are left on the forest floor for mulch and decomposition (most nutrients are in the growing tips). Slash burning is seldom necessary, eliminating that type of air pollution, soil damage, and the attendant hazard of fire escape.

Camp retains some snags and brush for wildlife habitat, soil protection, and favorable microclimate. Because of these objectives and techniques, he does not use herbicides; he feels that "needs" for these chemicals result primarily from poor pest management.

The road system is the key to efficient, economical implementation of objectives. Roads are kept to a basic minimum width of 12 feet, and are spaced at intervals so there is access to trees from the road by winching, eliminating the use of "skid roads" and avoiding the operation of equipment on the forest soils and the compaction which adversely affects tree growth. Road grade is preferably kept at a maximum of 10% to decrease maintenance problems and provide better winter access. Care-

Orville Camp: Innovator in Forest Management

Prior to purchasing 160 acres in the Illinois Valley in 1967, Camp had pursued successful careers in electronics and real estate, but he was seeking something more self-sufficient which would fulfill needs beyond personal and monetary ones. His property had been stripped of all marketable timber before he obtained it. He originally planned to subdivide it, but later recognized the possibilities for reforestation. With his own ideas from a farming background and keen insight and common sense, he has developed an efficient system of management which has turned the property into a productive family endeavor and example for other small woodland owners.

Camp has participated in community activities as school committeeman, Grange master, Soil and Water Conservation Board member, CAC president, and as a member of the Josephine-Jackson Small Woodlands

Assn. In 1979 he was chosen "Farmer of the Year for Woodland Management" by the Illinois Valley Soil and Water Conservation District, and as the Josephine County Tree Farmer of the Year in the state competition sponsored by the Oregon Small Woodlands Association, public forest agencies, and private associations. Because the Josephine-Jackson Small Woodlands Assn. covers such a large area, the distances involved in attending meetings was a factor that limited membership and participation. In early 1980, Camp helped form a satellite group in the Illinois Valley, which immediately attained a membership of one-third that of the two-county organization. It is the first such group established in this manner, working in conjunction with the county and state organizations, and has become a model for involvement of increasing numbers of small woodland owners.

ful consideration is given to construction near streams (both year-round and seasonal) and prevention of erosion. The use of smaller, less costly equipment reduces cost and impact on the forest. Low cost of operation and good access allow economic salvage of scattered trees; the road system and firebreaks afford fire protection.

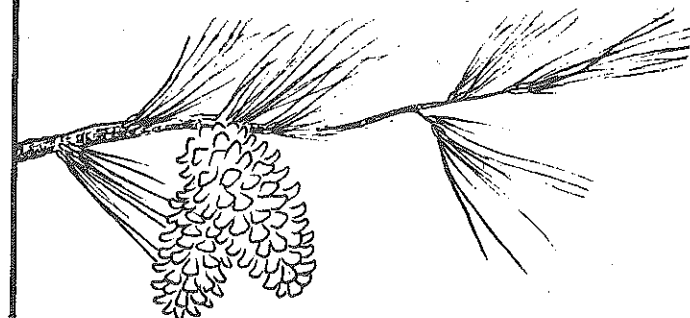
With each harvest rotation, the quality and quantity of the products improve, and there is an expanding market for hardwoods and chips. Besides the increasing per-acre returns and a constant energy supply for home heating, Camp finds the work satisfying: It requires diversified knowledge and allows for greater self-sufficiency. Since the manager resides where he works, commuting is unnecessary, saving fuel as well as increasing production time. There are abundant on-site recreational opportunities and the family has an ideal living area.

Necessity for Good Small Woodland Management

About 14% of Oregon's commercial timberland is in small ownerships. Successful management of these woodlands is extremely important to the area and the nation, but small woodland owners operate under a number of handicaps and must sometimes compete with real and *de facto* government subsidizations of other interests. In order to survive, the small woodland manager *must* operate economically and efficiently. Camp does not believe this is possible with commonly recommended capital- and energy-intensive methods which adversely impact vital components of the forest community. He thinks his system provides a practical and workable rationale and technique for small woodland management, and that it can also be adapted to government and industrial lands.

Application to Larger Units

While a small woodland owner can both manage and perform most of the work in a full-time operation on 40 or more acres, government or industrial foresters could manage much larger parcels of around 2000 acres because harvest and reforestation work would normally be done by other personnel. If these foresters lived on the units, they would better understand its varied conditions and management requirements and should have greater incentive and interest in the work. Commuting time, expenses, and fuel use would be greatly reduced. Camp believes that regeneration would be several times as successful under this system as it is under present methods, and that all the agencies' objectives could be

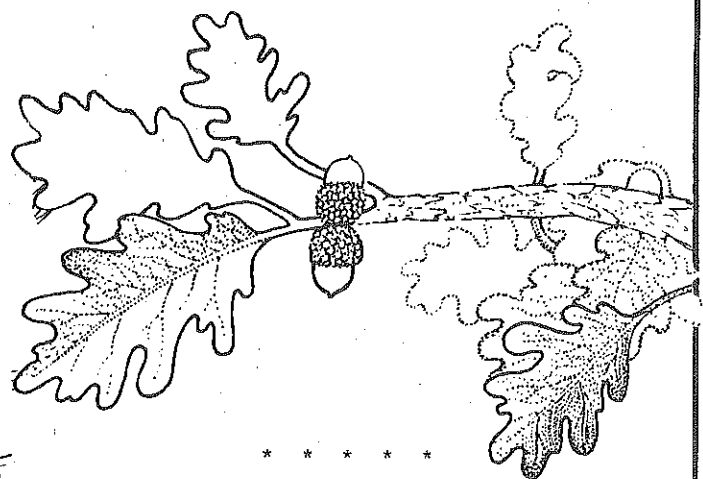


met. He thinks, furthermore, that many agency foresters would prefer this type of management.

Forest Land Classification

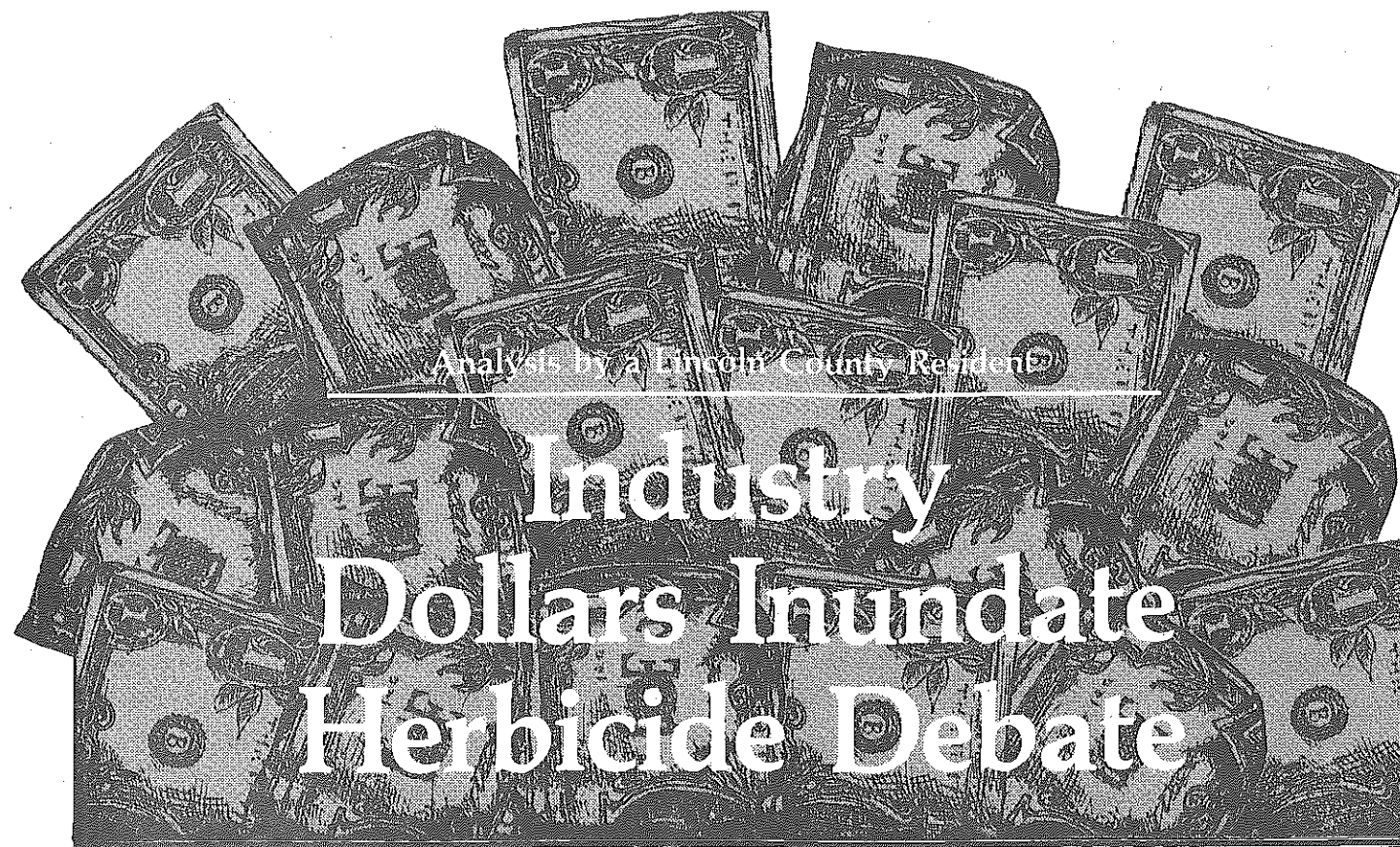
Recently Camp testified at hearings on the Josephine County Comprehensive Plan. He stated, "Probably the single biggest issue and misleading term is 'downzoning' and the alleged loss of rights accompanying a change of classification." "Downzoning" refers to a change in land classification which restricts subdivision, as from residential to agricultural or forestry. Camp maintains that it would be difficult to find any "rights" that would be lost by such zoning *except* the right to subdivide, whereas many rights are lost when the few who profit from subdivision impose changes in the environment and increased pressure on community services, roads, water supply, air quality, etc., which also increase taxes for the surrounding area, plus the loss in agricultural or forestry land base. Camp believes that if we allow these trends and large-scale mechanized forest management methods to continue, the opportunity for self-sufficiency will continually erode, making people increasingly dependent.

What can you do? Keep informed on forest management issues whether or not you are directly involved in forestry work or woodland ownership or management. Timber Management Environmental Statements, Forest Plans, and other documents can provide information, as well as opportunity for public involvement. Comprehensive plans being prepared in Oregon counties under LCDC involve crucial decisions on forest land use. Find out what is happening in your area—learn and participate! Forest management affects everyone.



"A TREE FARM is an area of privately-owned, tax-paying land, protected and managed for repeated crops of forest products and all the attendant multiple use benefits of watershed protection, recreation, and improved good and habitat for wildlife. . . . Much of America's hope for essential supplies of forest products in the years ahead lies in the American tree farm system."

—American Forest Institute (quoted from 1979 Oregon Tree Farmer of the Year Awards Program)



by Findlay d'Arbois

Amid other absurdities of the November elections, two comparatively mild local measures to control herbicide use in Lincoln County, Oregon lost by a five to three margin, indicating an encouraging level of public concern among voters. The tactics used to defeat the measures, however, are an instructive display of the money and might industry is prepared to devote to protect its interests in a small, remote area.

Ballot Measure 9 would have banned *aerial* application of herbicides within 500 yards of any body of water and *any* application of herbicides within 100 yards of any body of water. It would have banned any commercial application of herbicides without a permit or government observer. Measure 10 would have banned use of herbicides within 15 feet of any road or right-of-way, including on private property.

While not an outright ban, Measure 9 would have severely curtailed aerial application, since few potential herbicide sites exist in Lincoln County which are more than 500 yards from a creek, stream, swamp, river or estuary. Virtually the only aerial applications of herbicides in the county are those performed by timber companies, U.S. Forest Service, and private timber owners. Few, if any, farmers and stockmen in the county apply chemicals from aircraft, and the requirement of a permit or observer for commercial ground applications would cost little more than slight inconvenience. Measure 10, however, would have effectively banned herbicides for roadside use. Most right-of-way use in the county is to maintain visual clearance along immediate road borders.

The two measures were sponsored by the Lincoln County Medical Society, a courageous political action rare in the medical profession of this country. On issues of public health or environmental protection, they have been notoriously silent, willing to leave such matters to government regulatory agencies. Their education neither prepares nor encourages physicians to explore possible connections between a host of symptoms and exposure to toxic chemicals. American medicine tends to treat symptoms, rather than to investigate causes of disease, with minimal emphasis on preventive medicine.

Events in Lincoln County over the last few years evidently convinced local physicians to take a step often voiced in theory but seldom accomplished in practice: the extension of their commitment to healing the sick to include protecting the healthy. News of recent battles over toxic chemicals—Agent Orange in Vietnam, the C.A.T.S. vs Berglund case in Oregon, the Seveso disaster in Italy, Love Canal in New York, the rash of spontaneous abortions linked to phenoxy herbicide use in the Alsea study area (including Lincoln County), the Michigan PBB disaster—no doubt made doctors more aware that certain medical problems could be related to toxic chemical exposure.

What specifically prompted Lincoln County physicians to act was their alarm over an unusually high incidence of birth defects in the county, in particular defects of the central nervous system which Vietnamese researchers had linked with human exposure to phenoxy herbicides.

During their four years of practice in Lincoln County, Drs. Renee and Chuck Stringham have delivered 300 babies. Nineteen of them were born with birth defects, seven of them neural tube defects (see related explanation that accompanies this article.) Two of these seven were anen-

cephalic. (Such infants are usually normal and healthy in appearance, except that the skull ends in a bony ridge above the eyebrows with a thin veil of tissue covering an empty brain cavity. Anencephalic infants can be kept alive for a few hours or days at most.) Two out of 300 births is more than thirteen times the national average of five anencephalic for every 10,000 live births. The Stringhams knew of one other anencephalic child delivered in the county by one of their colleagues during that four-year period, and of at least one more born to a local couple but delivered in a Portland hospital. How many others may have been delivered at home or out of the county is impossible to estimate.

The appalling reality of encountering these statistics in a hospital delivery room caused the Stringhams and their fellow physicians in Lincoln County, along with doctors from other heavily-sprayed areas of Oregon, to support a statewide initiative petition to restrict phenoxy herbicide use. When that petition failed to obtain the needed signatures, Lincoln County physicians sponsored the two local measures.

Against such prestigious opponents, industry public relations people could not utilize their usual tactics; these doctors could not be labeled dope-growing hippies, crackpots, hysterical women, or left-over activists from the sixties. All the resources commandeered to fight a state petition that never materialized apparently became available to fight two measures in a small coastal county, but the old propaganda and tactics wouldn't work against the prestige of local physicians. Industry needed a new angle.

Industry tried several angles at once. Most significant about industry tactics in this campaign, successful as they were, is the fact that industry essentially went underground. This time, no Dow Chemical public relations people flew in from Midland, Michigan. The usual Oregon State University scientists were only minimally represented. Professor Michael Newton kept a low profile, even though his ownership of timber land in the county gave him a direct interest in the outcome. The county was not inundated with copies of the CAST report on phenoxy herbicides, and was spared the usual invasion of CAST rent-a-scientists.

Instead, industry engineered their own attempt at grassroots organizing. They first concentrated on finding local people in Lincoln County to front for them. David Dietz, a Salem attorney, mailed letters to carefully-selected local residents. Through his efforts, Lincoln County Citizens for Common Sense was created with the public appearance of having arisen spontaneously in the county. Only local names were to appear on subsequent mailings by the group. In June, this organization mailed county voters a packet of (mis)information with a cover letter which began, "Dear Lincoln County Neighbor, How would you like to be cited, fined \$500 and have a criminal record just because you put weed/feed on your lawn?"

The June letter urged voters not to sign petitions to place the herbicide measures on the ballot. (This tactic is strongly reminiscent of those utilized by Western Environmental Trades Association to defend the nuclear industry from citizen initiatives. WETA has frequently fronted for the timber industry as well.)

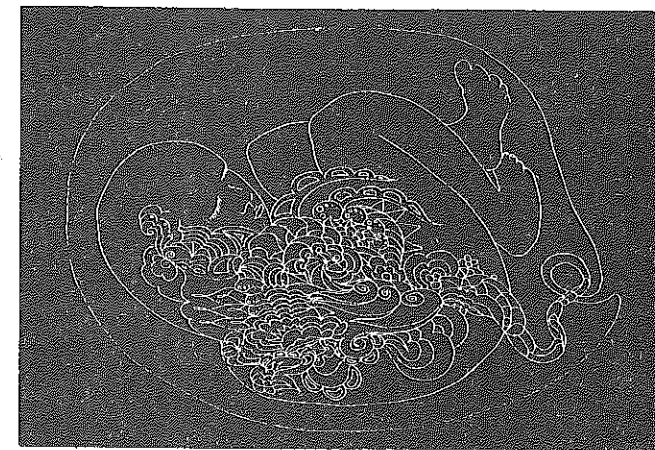
In spite of the mailing, enough signatures were collected to place the measures on the ballot, at which point Citizens for Common Sense accelerated their activities. In the

What the Doctors Saw

On the eleventh to thirteenth days after fertilization of a human ovum—before the mother has missed her period or has reason to suspect she is pregnant—a bulge appears in the ball of cells that represents the beginnings of a person. On the dorsal side of the embryonic mass, the outer layer of cells (ectoderm) forms two parallel folds which come together like a section of stovepipe, forming a follow tube running the length of the embryo. This is the neural tube, the foundation for the central nervous system. By the end of the first month of gestation—about the time the mother may realize she is pregnant—it has already grown into the beginnings of the brain, spinal cord, and nerves that control the functions and behavior of a life.

In order for the cells of that first indeterminate embryonic ball to differentiate into the infinitely complex variety of structures that constitute a living human or animal, such cells must be extraordinarily responsive both to genetic instructions and to biochemical cues from simultaneously developing cells around them. This very responsiveness makes them susceptible to minute physical or chemical changes that can influence either genetic codes or cell metabolism. Especially in the earliest stages of development, a single molecule of some powerful chemicals can redirect the differentiation of any cells in process at the time of exposure, resulting in irretrievable "mistakes," or birth defects.

Some chemicals appear to influence the differentiation of specific structures, resulting in characteristic deformities, such as the limb structures of "thalidomide babies." Evidence is mounting—from Vietnam, from offspring of Vietnam veterans, from laboratory experiments and from heavily sprayed areas around the U.S.—that phenoxy herbicides may exert such a specific influence on neural tube and central nervous system development. Characteristic birth defects resulting from neural tube injury are spina bifida, anencephaly (absence of a brain), hydrocephaly (abnormal accumulation of cerebro-spinal fluid within the skull, causing enlargement of the head, atrophy of the brain, mental deterioration & convulsions), porencephaly (abnormal cysts or cavities in the brain), and encephalocele (protrusion of brain substance through a congenital abnormal opening in the skull).



months before the election, the group hired at least one slick Portland PR firm to handle its campaign. More significantly, it retained attorney Dietz as a full-time, on-the-ground campaign manager, although Dietz was rarely seen publicly without a token local resident in tow.

Articles and ads blossomed in the local newspaper, meetings were called, local radio stations broadcast lengthy paid announcements, voters received frequent mailings on expensive stationery. The quality of the propaganda never improved beyond that of the CAST report and other industry literature, but the scale of the campaign was new. Very little common sense was required to question how a small flock of local sheep and cattle ranchers could finance it.

Worried perhaps by this consideration and by the prestige of the Lincoln County Medical Society, industry took a new tack late in the summer. Using the bulk mailing permit of CCS, a new group called Doctors for Facts initiated a direct mail campaign to Lincoln County voters. The "facts" contained in the packet reiterated material sent previously by CCS, often verbatim.

Doctors for Facts had a Lincoln County address, although not a single physician, veterinarian or pharmacist listed on its letterhead either resides or practices in Lincoln County. Further investigation revealed that most of them were located in distant counties of eastern Oregon, that one at least had not authorized use of his name, and that the pharmacists listed were not licensed to practice in the state.

The propaganda generated by CCS and Doctors for Facts consisted of the same misinformation, cleverly manipulated quotes and data, and undocumented statements that are by now familiar to readers of the CAST Report, Dow Chemical literature, other industry publications, and Forest Service environmental impact statements. The presentation was new, however. "Slick PR and printing disguised as down-home, grass-roots handmade literature," one reader described it.

Another interesting feature was the "referenced" document included in a Doctors for Facts packet. Of the ten "references" cited, three are statements from the EPA, Stanford Research Institute, Minnesota Department of Health, Oregon State Law, U.S. Code, CAST Report, and the National Forest Products Association comprise another six items on the list. The remaining reference is to "Oregon State University Extension Specialists Dr. James Witt and Dr. Frank Dost, specialists in chemistry and toxicology," to whom are attributed such embarrassing statements as, "The 2,4-D begins breaking down quickly through sunlight

and plant, animal and microorganism enzymes (sic) actions. It ultimately turns into carbon dioxide."

Few statements in these "educational" materials can actually be documented from the references cited, and the citations are presented in an artful disarray that links unsubstantiated information with a single documentable item. Evidently no one would take responsibility for some often-repeated statements that defy scientific explanation, such as the claim that "no chemical is hazardous if we consume it or are exposed to it in small enough amounts."

Such literary tricks were support for the main thrust of the campaign, which was to barrage the public with excessive misinterpretations of the ballot measures. On television and radio, in frequent mailings, in newspaper ads and articles, private citizens were told that the measures, if passed, would mean jail sentences, fines, and criminal records charged against them for spraying dandelions on their lawns.

"I made the fatal mistake of being optimistic," one supporter of the measures said after the election. "I counted on the voters thinking. I thought they would trust their own doctors enough to read the measures, or at least to question the sources of what they heard on the other side. But they didn't think. What mattered—what won their votes—was not what they heard, but how many times they heard it. . . . We couldn't afford the kind of media exposure the opposition could buy. Another \$1,000 or \$2,000 would have made the difference. We could have won."

While the public campaign against the measures was ostensibly fought by local farmers and townspeople with no evidence of industry involvement, the situation backstage was quite different and most enlightening. Early in the development of the campaign, at least one multinational timber company applied subtle but palpable pressure to keep the medical society from sponsoring the measures. (The medical society was the sole sponsor of the measures; withdrawal of their sponsorship would have ended the issue for this election.) Some officers of the society were told by industry representatives that things could be very difficult for them, were they to be tied up in the courts for years with spurious lawsuits. The innuendos nearly led to the society's withdrawal.

When that technique failed, the same corporation attempted, again by subtle suggestion and innuendo, to bargain with the medical society; corporate representatives said they might consider withdrawing their opposition to a hospital consolidation measure supported by the society in return for withdrawal of support for the herbicide measures. The society refused to consider such a bargain.

The contest became even nastier as election day approached. Signs supporting the measures were defaced and destroyed in a systematic fashion, particularly in North Lincoln County. The media barrage intensified, with full-page local ads and frequent radio and TV announcements.

Because of an "apparent mix-up on filing deadlines" on the part of the County Clerk, the secretary of state received both pro and con statements concerning the measures too late to include them in the official voters' pamphlet. At this point, both Citizens for Common Sense and Doctors for Facts mailings to voters increased, coming regularly the last few weeks before the election. Citizens for a Healthy County, the group formed to support the medical society measures, could not afford to compensate in this way for the loss of the voters' pamphlet statement. County Commissioner Andy Zedwick proposed a county-sponsored mailing to registered voters presenting the medical society's position, but his two fellow commissioners denied this recommendation. Zedwick bitterly suggested they "drink a couple of glasses (of herbicide) if they think this stuff is so good for you."

A week before the election, Dietz added a new element to the battle with a well-publicized threat to file suit against Citizens for a Healthy County, alleging that ads sponsored by local physicians were false. The ads cited studies showing increased incidence of soft tissue cancers in farm and forest workers exposed to herbicides; claimed that alternatives to sprays exist; claimed that the only way to prevent a cancer-causing substance from being a health hazard is to keep it out of the environment; and suggested that citizens would end up paying the costs of government failure to regulate chemicals. Dr. Renee Stringham asserted that the statements could be documented. No suit was ever filed, but the damage to the doctors' cause was done.

Dietz boasted to a reporter at one point that his group would spend as much money as it needed to tell its side of the story. Where that money came from is revealing (see financial statement). In the end, it was money that defeated the two measures by a vote of approximately 10,000 to 6,000. This was not money generated within the county by its own citizens, but rather money largely from multinational corporations with more concern for profits than for 33,000 residents of a small coastal area.

A few of those residents who blindly voted against the herbicide measures are now having second thoughts. "They said I could go to jail just for treating my lawn," one woman said. "I believed them. I didn't read the measure carefully enough to see it wasn't true."

As more distressing effects of herbicide exposure accumulate in the public health record, industry's overkill tactics may backfire. Thanks to the huge scale of this campaign, voters in the future will approach the issue with far greater awareness of the controversy than they have in the past. An informed, aware electorate will be less susceptible to the misinformation and scare tactics that can only be effective on an ignorant populace. By using only temporarily credible tactics, industry traded a tactical victory for a strategic loss.

That tactical victory in Lincoln County is a monument to industry contempt for the health, welfare, and intelligence of county voters. In time, the scale of the industry campaign itself will successfully generate an equal and opposite reaction in a population exposed twice yearly to industry and government herbicide spraying.

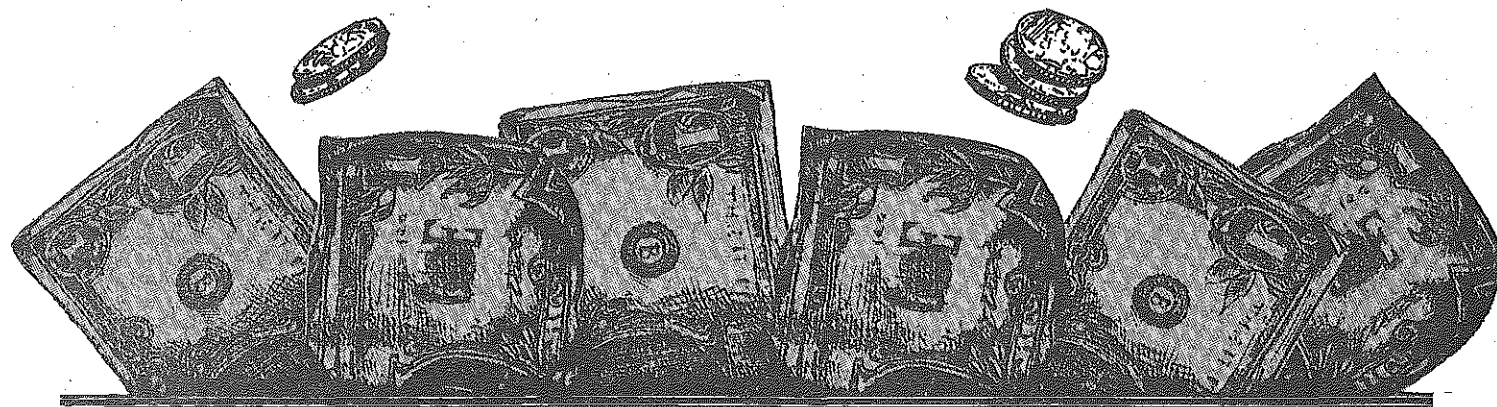
Financial Statement of Citizens for a Healthy County filed with county clerk October 22, 1980

Contributions	
Benefit concert	\$552.00
Donation, Bill Partain	500.00
Donation, Donald E. Schwartz	100.00
Donation, H.C. Christiansen	73.00
Other donations	227.59
Total	\$1452.59
Expenditures	
Voters' pamphlet statement (not printed in pamphlet)	\$600
Printing costs	235.00
Miscellaneous (mileage, meals, telephone, etc.)	191.59
Total	\$1026.59
Balance	\$426.00

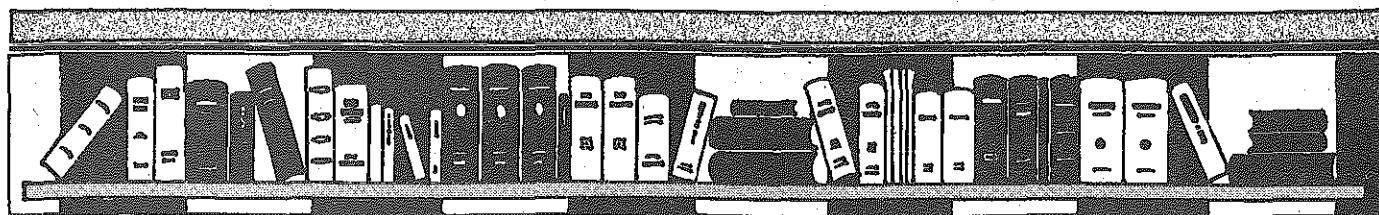
Financial Statement of Citizens for Common Sense filed with county clerk Oct. 14, 1980

Contributions	
Georgia-Pacific Corporation	\$4,500
Oregon Wheat Growers League	5,000
Willamette Industries	2,250
Weyerhaeuser	2,250
International Paper Corp.	2,250
Champion International Corp.	2,200
Davidson Industries	1,250
Longview Fibre Co.	1,000
Crown Zellerbach	1,000
Boise Cascade	1,000
Northwest Christmas Tree Growers Assn.	2,500
21 contributions more than \$100 each	2,100+
Total	\$27,300(+)
Total is lower limit because of vagueness in reporting method. Table does not include 100 contributions reported only as being in amounts under \$100 each.	
Expenditures	
Rocky Marsh Public Relations, Portland	\$1,662
Insty Print of Salem	2,500
Postage	2,000
Treasurer salary	1,000
David Dietz, consulting fee	1,000
Contribution to Doctors for Facts	7,200(+)
Total	\$15,362(+)

These financial statements were filed on October 14, two weeks before the election. It is possible for contributions to have been made during the last two weeks of the campaign. The author reports that both advertising efforts and direct mailings by CCS were accelerated during these final weeks, so it seems safe to assume that the group spent considerably more than is reported here.—Ed.



LITERATURE



The Disposable Soldier

reviewed by Judith Molinari

GI Guinea Pigs: How the Pentagon Exposed Our Troops to Dangers More Deadly Than War by Michael Uhl & Tod Ensign, Playboy Press, 256 pp. \$9.95.

... It is fever, and not the fight—
Time, not battle—that slays.

Common Form:

If any question why we died,
Tell them, because our fathers lied.

A Dead Statesman:

I could not dig: I dared not rob:
Therefore I lied to please the mob.
Now all my lies are proved untrue
And I must face the men I slew.

What tale shall serve me here among
Mine angry and defrauded young?

—Rudyard Kipling, Epitaphs of the War,
1914-1918

From 1945 to 1961, the United States conducted atmospheric testing of nuclear weapons (A- and H-bombs) in the Pacific and in the Nevada desert. Most of the tests were well-publicized demonstrations of American military power. What was not publicized at the time was that among the many effects studied was the capability of ground troops

to function in the immediate aftermath of a nuclear explosion. From trenches within 2400 yards of ground zero, troops were ordered to launch "attacks" into the blast area within minutes of the explosion. They wore no protective clothing, no respirators, and the few film badges for measuring radiation distributed among them were inadequate (not capable of registering alpha and beta radiation or low-energy gamma radiation). Military standards for allowable radiation exposure per test were more than double those allowed AEC workers for an entire test series.

In spite of a leukemia rate four times the norm among "veterans" of these tests and an excess of cancer deaths as well, "not one dime has been spent conducting research or medical follow-up on any of the 458,290 Americans that the Department of Energy lists as having been present at one or more of the atmospheric bomb tests." (In response to a toll-free phone line established by the Defense Nuclear Agency, 2400 callers reported that they suffered from leukemia or other cancers.) Thanks to the Veterans Administration's Catch-22 requirements of proof of exposure to massive radiation and appearance of symptoms during or shortly after service, only 19 claims for radiation-induced disability had been allowed as of February, 1979.

Radiation-induced leukemia and other cancers have a latency period of between eight and thirty years. As the last of the nuclear tests involving American troops was conducted in Nevada, the first defoliation missions were being flown by the U.S. Air Force in Vietnam, spraying chemicals developed but never used during the Second World War. Over the next nine years, much of the cropland and

more than a third of the forest that covered two-thirds of South Vietnam would be sprayed. Only when American scientists corroborated Vietnamese reports of the devastating effects of the herbicides on the environment and human health was the use of chemical warfare weapons finally halted.

At the time, it was concern for the environment and political controversy over the effects of herbicides on the Vietnamese population that brought the spray program to a halt. No one seemed to consider the fact that chemicals which could cause cancer and birth defects in Vietnamese people would have the same effect on U.S. troops. In fact, no one cared. As in the nuclear experiments, the American GI was treated by the Pentagon with about as much respect as a disposable diaper. Coming home, he was treated as a pariah by a society that was ashamed of his existence. When the symptoms of poisoning began to manifest themselves—the miscarriages, birth defects, cancers, rashes, central nervous system disorders—he encountered public indifference. His appeals for medical aid from the Veterans Administration were dismissed with the same denial tactics accorded the nuclear vets, the same Catch-22 requirements of proof.

Since Rachel Carson's *Silent Spring*, much has been written about the contamination of the environment by pesticides. The most effective and deadly of these chemicals, including herbicides, originated in chemical and biological warfare laboratories. From these arsenals, their agricultural and domestic use as "economic poisons" developed as secondary and exceedingly profitable operations. The sterility, genetic damage, cancers, and illness of Agent Orange veterans are an ironic tribute to the growth of this

grim alliance between military and agricultural science. In the hands of the military, biology—the science of life—has become an alchemy of death wielded by a reckless Sorcerer's Apprentice.

GI Guinea Pigs is a painful and embarrassing book, a history we cannot afford to ignore. The stories of the nuclear and Agent Orange "guinea pigs" are significant beyond the ethics of war and public indifference. If the nation's military command can throw "its own soldiers into the path of its weapons of destruction," the civilian population can expect no quarter from either the military or its lab-partner, agriculture.

"We've got to save the fucking for the fighting men," General Patton proclaimed in 1945. By 1980, the U.S. government was saying, in effect, "Fuck the fighting men."

Order from: Citizen Soldier, 175 Fifth Ave., Suite 1010, New York, N.Y. 10010, (212) 777-3470.



Help Needed in Research Work

Attention, college students: want an opportunity to do relevant, useful research that may have implications beyond the academic credit you receive? NCAP needs university students to do valuable research. We have a backlog of potential studies and project ideas that we do not have time to work on. We are not in a position to pay anyone, but if you are looking for a topic for a research paper or thesis, here is a list of suggestions:

1. A scan of an area for vital health statistics to determine what sorts of diseases are on the rise.
2. A look into record-keeping systems of state agencies: how well they are set up, how easy it is to retrieve information from them, and how available they are to the public.
3. A study on water quality in your state: what kinds of chemicals are showing up in city and county water supplies?
4. A study on the use of pesticides throughout the state or particular county you live in: what is being sprayed and for what reason, how much of the chemical is being sprayed and who is doing the spraying? Perhaps make a map that illustrates concentrated spray sites throughout the state.
5. A look into toxic waste disposal laws: are they effective?
6. A research project on powerline spraying.

7. An article or paper on the practical application of Integrated Pest Management.

8. A list of the most commonly used chemicals in agriculture: what is being used on fruits, vegetables, and grains, which chemicals are most toxic and why?

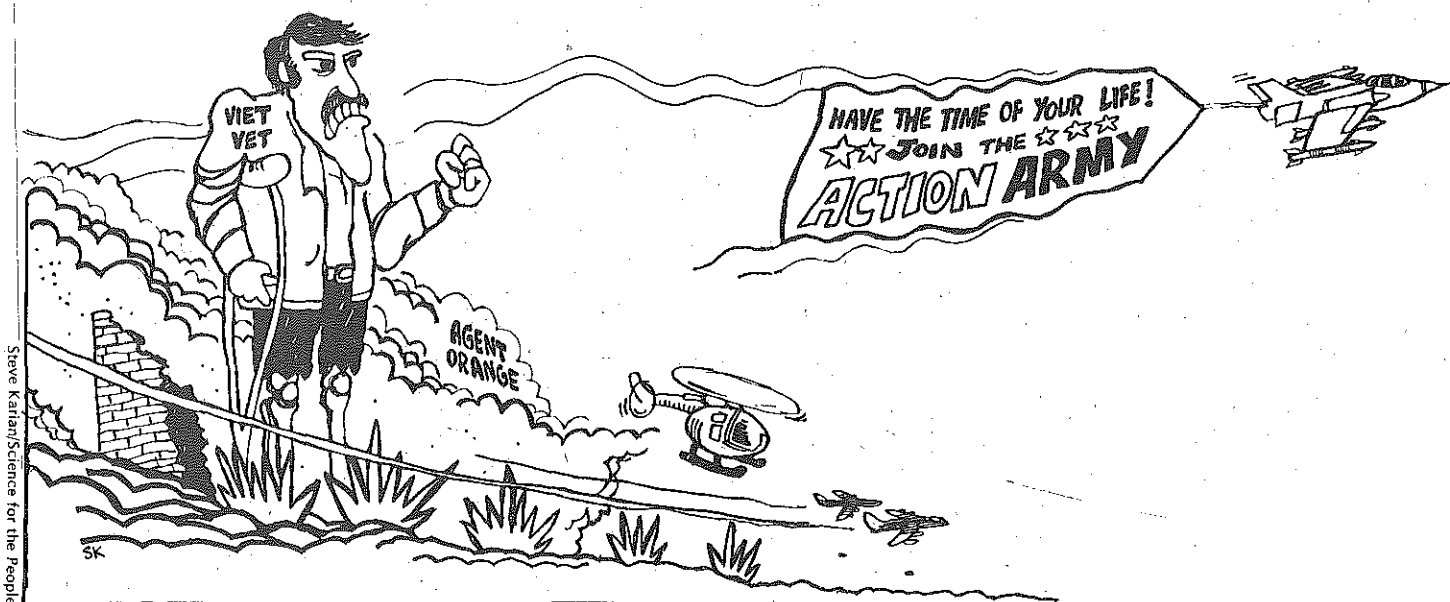
9. An information packet on the gypsy moth: what is happening in different parts of the country; what is being done about the problem?

10. Toxicological background on a long list of chemicals, compiling studies on a particular chemical with some sort of evaluation included in summary.

This is a rough list. These suggestions can be discussed further if you are interested. We get many requests for information, and although they often give us ideas for research, we do not always have the time nor resources to follow up on them.

If you would like to work on any of the above mentioned studies, or have an idea for a study that you feel would be useful, please contact us. We may be able to give you some materials as a starting point for your research, or direct you to other resources.

If you undertake a project that you think would interest NCAP, please send us a copy for our files. We would also gladly consider publishing it in NCAP NEWS. Write or call NCAP at Box 375, Eugene, OR 97440, (503) 344-5044.



TCDD in Game Causes Concern

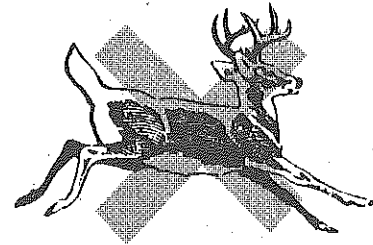
by Judith Kahle

In the last issue of NCAP NEWS (Vol. 2, No. 2, Fall, 1980), NCAP reported the finding of TCDD residues in deer and elk in the Pacific Northwest. The findings came out through statements by several of the Environmental Protection Agency's witnesses during the EPA's Cancellation Hearings of 2,4,5-T and Silvex.

The deer samples were taken from animals in a penned study area in the Blodgett Forest in Northern California, from deer and elk in the Olympic Peninsula in Washington, and the Tillamook and Allegany areas in Oregon. In the Blodgett Forest study (done in fall of 1978), from 3 to 30 parts-per-trillion (ppt) of TCDD were found in muscle, fat and liver tissue. In the Oregon-Washington study, the EPA found from 4 to 54 ppt of TCDD in the fat tissue, with a mean of 9 ppt. The samples were taken in 1977, from areas that were selected because they were widely sprayed with 2,4,5-T.

The story (which was reviewed for accuracy by EPA witness George Streisinger) went quickly from NCAP NEWS to national news. Shortly after the article appeared in print, NCAP received a call from a Eugene area radio station (KZEL) which had gotten the story off of the Zodiac Wire Service. After doing an interview with the author, KZEL turned the story in to the UPI (United Press International) wire service. From there it went to television, radio, and newspapers. A few of the articles that appeared were inaccurate, since the reporters apparently took their information from relatively uninformed or misinformed third-hand sources, but NCAP staffers were interviewed directly by several reporters. NCAP's phone started ringing off the hook, with calls from other news media, state agencies, an OSU researcher, and concerned hunters and their families. Calls came from as far away as Toronto, Canada. KZEL got even more phone calls than NCAP.

Although a spokesperson for the Environmental Protection Agency refused to confirm the figures (which are available), he did say that it is a matter for concern. The figures appear in the witness statements and transcripts of



cross-examination from an EPA Administrative Hearing (FIFRA Docket Nos. 415, et al.) and, as such, are on the public record.

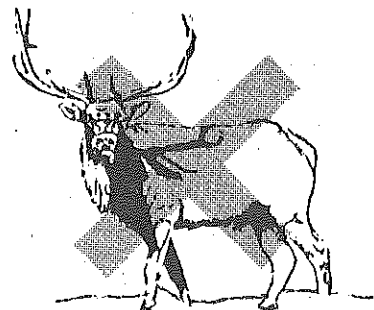
One of the points that callers have asked about, and that industry spokespersons have tried to deny, is this: Despite the fact that the samples were taken in 1977 and 1978, the findings of TCDD residues in those samples are relevant today, and are a matter for concern. The emergency suspension of 2,4,5-T and Silvex did not go into effect until March of 1979. There are deer alive today that had eaten vegetation that had been sprayed with 2,4,5-T or Silvex prior to that spring. There has been little research done on the breakdown of TCDD in animal tissue. What this means is that we don't know how long TCDD will remain in the tissue.

Another concern is that elk are primarily grazers, which means they are likely to get a certain amount of soil as a part of their diet. TCDD binds chemically to the soil, and its half-life is a year or longer.

Furthermore, if 2,4,5-T and Silvex are *not* cancelled, then they will be back in our forests contaminating our game.

Lastly, there are numerous other herbicides, pesticides, and soil sterilants which are used in forestry and on roadsides and rights-of-way, and their effects on game and their accumulation in the human food chain have been studied little or not at all.

The other major question people have asked is what they can do to reduce the possibility of eating contaminated venison. NCAP has some suggestions. First, try to eat game that lived in areas that were not sprayed with 2,4,5-T or Silvex, although spray records are difficult and sometimes impossible to obtain. Secondly, a young animal that was not alive prior to the suspension is far less likely than an older animal to have residues of TCDD in its tissue. Thirdly, eat deer as opposed to elk. Deer are primarily browsers, whereas elk are grazers and are more likely than deer to ingest contaminated soil. Lastly, don't eat the organ meats. The fat in venison occurs mostly in the lining of the internal organs, and is the tissue type where TCDD is most likely to accumulate.



In Memory of RON DIXON

by the NCAP Staff

On December 8, 1980, Ron Dixon was found dead in a hot springs pool in Hot Springs, Arkansas. It is assumed that Ron had a seizure and drowned. Throughout the year that Ron worked at NCAP, he experienced a variety of symptoms that he and his doctor believed were an indication of a neurological disorder. Ron had visited Stanford Medical Center several times for testing. At the time of his death, he had not been fully diagnosed by his doctor.

Ron had expressed fear and concern about the 18 months he had worked in an agricultural chemistry laboratory at Oregon State University. He worked with many toxic chemicals in a lab with a faulty ventilation system. (Ron and others noticed the poor ventilation system in the labs, and brought it to the attention of the university. The system was investigated, and subsequently replaced.) Ron suspected that exposure to these chemicals under such conditions, however, could have been the cause of his neurological problems, which he said he had never experienced before that period of his life. (Neurological disorders are commonly found in humans and animals exposed to a wide range of chemicals.)

While Ron worked as an NCAP staff person, he was hard-working and devoted. He helped organize the Summit Coalition for Alternatives to Pesticides in Blodgett, Oregon, where he lived on a farm. He did public speaking, research work, and wrote articles for NCAP NEWS. He spoke often of how vital this kind of work was to him; it was important to him to do whatever he could to support the growing number of people whose

lives have been disrupted by the misuse of chemicals.

We are sad to think that Ron could have been one of those people. And we are angry with the knowledge that certain economic values turn the world upside down to blame victims for trying to protect themselves.

Our hearts go out to Ron's family and friends. He was a loving person. He had a determination to learn and grow, to give and understand. All of us will miss him. We value what he did with his life, and draw renewed energy from him to continue in our work.



Craig Dunne/Free Country Times

To Be of Use

*The people I love the best
jump into work head first
without dallying in the shallows
and swim off with sure strokes almost out of sight.
They seem to become natives of that element,
the black sleek heads of seals
bouncing like half-submerged balls.*

*I love people who harness themselves,
an ox to a heavy cart,
who pull like water buffalo, with massive patience,
who do what has to be done, again and again.*

*I want to be with people who submerge
in the task, who go into the fields to harvest
and work in a row and pass the bags along,*

*who stand in the line and haul in their places,
who are not parlor generals and field deserters
but move in a common rhythm
when the food must come in or the fire be put out.*

*The work of the world is common as mud.
Botched, it smears the hands, crumbles to dust.
But the thing worth doing well done
has a shape that satisfies, clean and evident.
Greek amphoras for wine or oil,
Hopi vases that held corn, are put in museums
but you know they were made to be used.
The pitcher cries for water to carry
and a person for work that is real.*

—Marge Piercy

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18. Willamette Brush Control Study, Groundwork, Inc.	3.00
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20. Testimony on the Possible Link Between Herbicides and Miscarriages in the Coast Range of Oregon (by Bonnie Hill)	1.75
21. The Other Face of 2,4-D (By the South Okanagan Environmental Coalition)	7.00
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