AN (1) AD-A129 196
FG (2) 130200
CI (3) (U)
CA (5) ARMY ENGINEER WATERWAYS EXPERIMENT STATION VICKSBURG MS ENVIRONMENTAL LAB
TI (6) Field Evaluation of Two Endothall Formulations for Managing Hydrilla in Gatun Lake, Panama.
DN (9) Final rept.,
AU (10) Westerdahl,Howard E.
RD (11) Jan 1983
PG (12) 174p
RS (14) WES/TR/A-83-3
RC (20) Unclassified report
NO (21) Report on Aquatic Plant Control Research Program.
DE (23) *Aquatic plants, *Water hyacinth, *Herbicides, *Lakes, Panama, Control, Sampling, Water quality, Algae, Taxonomy, Statistical data, Tables(Data)
DC (24) (U)
ID (25) *Endothall, Hydrilla
IC (26) (U)
AB (27) Aquatic plant coverage of Gatun Lake has steadily increased since completion of canal construction in 1914. Hydrilla (Hydrilla verticillata (L.F.) Royle) and waterhyacinth (Eichhornia crassipes (Mart.) Solms) are the major nuisance plants. Analysis of aerial photographs has shown these plants to have an areal distribution of approximately 5400 ha. A study was conducted to (a) evaluate the efficacy of two endothall formulations, i.e., Aquathol K and Hydout, for hydrilla control; (b) determine the effects of each formulation on water quality and the nontarget planktonic community; (c) evaluate the extent of herbicide dispersion in the test area; and (d) determine persistence of herbicide residues in water, hydrilla, and sediment within the test plots for supporting Federal registration of Hydout and expansion of the current Federal label for Aquathol K. Aquathol K and Hydout were effective at controlling hydrilla within the treatment plots. No adverse impacts on selected water quality parameters, e.g. dissolved oxygen, pH, water temperature, total Kjeldahl nitrogen, ammonia nitrogen, and total phosphorus, were observed. Only transitory shifts in the plankton community composition and vertical distribution were observed over the 49-day study period. Herbicide dispersion from the treated area was apparent during the first 3 days following treatment. Endothall was detected in the water from the buffer zones of those plots treated with Aquathol K.
AC (28) (U)
DL (33) 01
SE (34) F
CC (35) 411388

Enclosure

AN (1) AD-A107 083
FG (2) 060300
FG (2) 080100
FG (2) 130200
CI (3) (U)
CA (5) ARMY ENGINEER WATERWAYS EXPERIMENT STATION VICKSBURG MS
TI (6) Proceedings, 15th Annual Meeting, Aquatic Plant Control Research Planning and Operations Review, held 17-20 November 1980, Savannah, Georgia.
DN (9) Final rept.
RD (11) Oct 1981
PG (12) 511
RS (14) WES-MP-A-81-3
RC (20) Unclassified report
DE (23) *AQUATIC PLANTS, *ARMY CORPS OF ENGINEERS, *SYMPOSIA, * BIOLOGICAL WEED CONTROL, *CONTROL, *WATER HYACINTH, ARMY RESEARCH, MONITORING, MATHEMATICAL MODELS, CHEMICALS, HERBICIDES, REPORTS
DC (24) (U)
ID (25) Hydrilla
IC (26) (U)
AB (27) Topics at this meeting included: Problem Identification and Assessment; Technology Development in Biological Control; Mechanical Control; Chemical Control; Large-Scale Operations Management Tests; and Aquatic Plant Control in the Panama Canal.
AC (28) (U)
DL (33) 01
SE (34) F
CC (35) 038100

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AN (1) AD-A091 303
FG (2) 050100
FG (2) 060400
FG (2) 240400
CI (3) (U)
CA (5) ARMY ENGINEER WATERWAYS EXPERIMENT STATION VICKSBURG MS
TI (6) Proceedings of the Annual Meeting (14th) Aquatic Plant Control Research Planning and Operations Review, Held at Lake Eufaula, Oklahoma on 26-29 November 1979.
DN (9) Final rept.
RD (11) Oct 1980
PG (12) 393
RS (14) WES-MP-A-80-3
RC (20) Unclassified report
DE (23) *WEED CONTROL, *AQUATIC WEEDS, *RESEARCH MANAGEMENT, CONFERENCING(COMMUNICATIONS), HERBICIDES, CHEMICALS, HYDROLYSIS, POLYMERS, MATHEMATICAL MODELS, COST ANALYSIS, ENVIRONMENTAL PROTECTION, HUMANS, AQUATIC ANIMALS, PLANT GROWTH, INSECTS, PATHOGENIC MICROORGANISMS, WATER QUALITY, WATER POLLUTION, WATER POLLUTION ABATEMENT, ECOSYSTEMS, TRACKING, RADIO TELEMETRY, TEST AND EVALUATION
DC (24) (U)
ID (25) Harvesters, Waterhyacinth, Watermilfoil, Hydrilla, White Amur fish, Fenac
IC (26) (U)
AB (27) Contents: Initial Plans for Aquatic Weed Research by the U.S. Environmental Protection Agency; USAE Division/ District Presentations; Aquatic Plant Problems--Operations Activities; Chemical Control Technology Development; Biological Control Technology Development; Mechanical Control Technology Development; Problem Identification and Assessment for Aquatic Plant Management; Natural Succession of Aquatic Plants; Large-Scale Operations Management Test of Insects and Pathogens for Control of Waterhyacinth in Louisiana; Large-Scale Operations Management Test to Evaluate Prevention Methodology for Control of Eurasian Watermilfoil in Washington; Large-Scale Operations Management Test Using the White Amur at Lake Conway, Florida; and Aquatic Plant Control Activities in the Panama Canal Zone.
AC (28) (U)
DL (33) 01
SE (34) F
CC (35) 038100

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AN (1) AD-A081 458
FG (2) 060600
CI (3) (U)
CA (5) ARMY ENGINEER WATERWAYS EXPERIMENT STATION VICKSBURG MS
TI (6) Evaluation of Two Fluridone Formulations for the Control of Hydrilla in Gatun Lake, Panama Canal Zone.
DN (9) Final rept.,
AU (10) Sanders, Dana R., Sr.
AU (10) Theriot, Russell F.
AU (10) Arnold, Wendell R.
AU (10) West, Sheldon D.
RD (11) Nov 1979
PG (12) 48
RS (14) WES-TR-A-79-3
RC (20) Unclassified report
DE (23) *AQUATIC PLANTS, *PEST CONTROL, *HERBICIDES, PANAMA CANAL, LAKES, PYRIDINES, KETONES, SAMPLING, RESIDUES, PHYTOPLANKTON, WATER QUALITY.
DC (24) (U)
ID (25) *Hydrilla verticillata, *Fluridone, *Pyridinone/ 1-methyl-3-phenyl-5-(3-trifluoromethyl)phenyl-4(1H), Biomass
IC (26) (U)
AB (27) Hydrilla has become a significant aquatic plant problem in the Panama Canal Zone in recent years. To combat this growing threat to the use of Gatun Lake, fluridone, 1-methyl-3-phenyl-5-(3-(trifluoromethyl) phenyl)-4(1H)-pyridinone, was applied as a 4 lb/gal aqueous suspension and 5 percent pellet at rates of 0, 0.84, 1.70, 3.36, and 6.72 kg/ha active ingredient in 18 hydrilla test plots. Significant reduction in hydrilla biomass occurred after 84 days in plots treated at rates of 1.70 kg/ha or greater, while insufficient control of hydrilla occurred in plots treated at 0.84 kg/ha. Fluridone did not adversely affect dissolved oxygen and other water quality parameters, nor were there any noticeable disturbances of the plankton and benthic communities. The residue levels in both the water column and hydrosoil had decreased to less than 15 percent of the applied compound by 56 days after application. The observed responses were attributed to the small quantity of herbicide added to the water column. (Author)
AC (28) (U)
DL (33) 01
SE (34) F
CC (35) 038100

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AN (1) AD-A070 828
FG (2) 060600
FG (2) 020400
CI (3) (U)
CA (5) ARMY ENGINEER WATERWAYS EXPERIMENT STATION VICKSBURG MS
TI (6) The White Amur as a Biological Control Agent of Aquatic Weeds in the Panama Canal.
DN (9) Final rept.,
AU (10) Custer, Phillip E.
AU (10) Halverson, Francis D.
AU (10) Malone, James M.
AU (10) Von Chong, Cesar
AU (10) Theriot, Russell F.
RD (11) Apr 1979
PG (12) 40
RS (14) WES-MP-A-79-1
RC (20) Unclassified report
DE (23) *WEED CONTROL, AQUATIC PLANTS, AQUATIC WEEDS, FISHES, PROBLEM SOLVING, MAINTENANCE, PANAMA CANAL.
DC (24) (U)
AB (27) The Panama Canal has been plagued with both floating and submerged aquatic weeds since its opening. Although more and more money has been spent on herbicides over the years, the weed problem has increased. In February 1978, the Panama Canal Company introduced the white amur fish, Ctenopharyngodon idella (Val.), as a biological tool to control the submerged macrophyte, hydrilla, to Gatun Lake, the large freshwater reservoir through which the majority of the length of the Canal passes.
AC (28) (U)
DL (33) 01
SE (34) F
CC (35) 038100

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AN (1) AD-A015 426
FG (2) 110500
FG (2) 110600
FG (2) 110900
CI (3) (U)
CA (5) ARMY TROPIC TEST CENTER APO NEW YORK 09827
TI (6) Materiel Testing in the Tropics.
DN (9) 4th ed.
RD (11) Jun 1975
PG (12) 167p
RS (14) USATTC-7503001
RC (20) Unclassified report
DE (23) *Environmental tests, *Tropical regions, *Materiel, Handbooks, Degradation, Climate, Computerized simulation, Geology, Vegetation, Biodeterioration, Herbicides, Elastomers, Plastics, Textiles, Electronic equipment, Optical equipment, Leather, Acoustics, Human factors engineering, Seismology, Radio transmission, Ground vehicles, Panama
DC (24) (U)
ID (25) Canal zone
IC (26) (U)
AB (27) The US Army Tropic Test Center (USATTC) presents the 1975 update of Tropic Environmental Effects, retitled Materiel Testing in the Tropics. The handbook is a compendium of the US Army's experience in testing equipment in the humid tropics. Sources of information are tropic materiel tests, test methodology investigations, personal experiences, open literature, Department of Defense reports, and voluntary contributions from many scientists and engineers outside of USATTC. The document is the US Army's unofficial corporate memory of tropic materiel testing. Topics covered include the Panama Canal Zone environment, history of tropic tests, degrading environmental factors, materiel degradation, tropic reliability and maintainability, vehicular mobility testing, sound, visibility, and radio propagation, human factors engineering, working in the jungle, man-pack protability and computerized test site selection methods.
AC (28) (U)
DL (33) 01
CC (35) 042290

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