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**Description of contents**

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- (2) Folder title/number: **(12)**  
**729.5: Insect and Rodent Control Reports**

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KYUSHU MILITARY GOVERNMENT REGION  
HEADQUARTERS AND HEADQUARTERS DETACHMENT  
Fukuoka, Kyushu, Japan

VRV/ka

APC 24 Unit 5  
9 June 1949

729.5

SUBJECT: Use of Fluorescent Insect

TO : Commanding Officer, Fukuoka Mil Govt Team, APC 24-5  
Commanding Officer, Oita Mil Govt Team, APC 24-2  
Commanding Officer, Nagasaki Mil Govt Team, APC 24-5  
Commanding Officer, Kumamoto Mil Govt Team, APC 24-1  
Commanding Officer, Kagoshima Mil Govt Team, APC 970  
Commanding Officer, Miyazaki Mil Govt Team, APC 24-2  
Commanding Officer, Saga Mil Govt Team, APC 24-5  
Attn: Civil Information Officer

1. The enclosed copies of official documents relative to the use of Fluorescent Insect Light Traps are forwarded for your information.

2. The Economic Section this headquarters has requested that special publicity be prepared throughout Kyushu relative to the discontinuance of the subject Light Traps, in view of the enclosed studies and recommendations and for the following additional reasons:

- a. Saving of needed electricity.
- b. Excessive cost of traps which are being sold by Ken Governments to Farmers at about 10,000 yen apiece. It is believed that this excessive cost and the campaign that has been put out by Ken Governments to Farmers to buy these traps stems from personal reasons by certain interested officials who may be profiting thereby.
- c. Allocation of materials for construction of light traps will cease on 30 June 1949.

3. In view of the facts and reasons set forth above it is desired that an aggressive information program be instituted, in



Ltr, Kyushu MG Region, APO 24-S, dtd 9 June 1949, subj: "Use  
of Fluorescent Insect" cont'd

collaboration with your Economic Sections, to urge Farmers to  
discontinue the purchase or use of subject Light Traps.

FOR THE COMMANDING OFFICER:

CHARLES L. BACHTEL  
1st Lt SIG C  
Adjutant

2 Incls:

1. Insecticides  
& Fungicides  
WS #184.
2. Insecticides  
& Fungicides  
WS #174



INSECTS AND FUNGICIDES

1. Efficiency of Fluorescent Insect Light Traps

a. Professors T. Ishihara and M. Miyataki, Matsuyama Agricultural College, Ehime, Prefecture, reported on insect collections at a fluorescent trap during the summer of 1948. This report supplements the information summarized in Weekly Summary No 174 on a similar experiment at Kyushu University. The following table summarizes the results reported by the Matsuyama Agricultural College entomologists:

LIGHT TRAP CATCH

<u>Insect Order</u>	<u>Beneficial</u>	<u>Injurious</u>	<u>Neutral</u>
Coleoptera (beetles)	184,208	11,868	8,570
Hemiptera (True bugs)	8,377	6,332	307
Homoptera (aphids, leafhoppers, and allies)	0	12,801	0
Diptera (true flies and allies)	0	5,781	18,760
Lepidoptera (butterflies and moths)	0	5,195	0
Hymenoptera (bees and wasps)	523	5,622	0
Trichoptera (caddis flies)	3,102	789	0
Orthoptera (grasshoppers and crickets)	0	120	0
Isoptera (termites)	0	762	0
Neuroptera (lace-winged flies)	17	0	0
<b>TOTAL</b>	<b>191,825</b>	<b>48,970</b>	<b>18,637</b>

b. Of the 258,392 specimens collected, 73.9 percent were beneficial, nearly 18.9 percent injurious, and the remainder were neutral. Of the injurious species, 2,986 specimens of the rice stem borer (chilo simplex Butl.), were taken, or 1.53 percent of the total collection. No paddy borers (Schoenobius incertellus Wlk.) were reported, although the species is common in that area. The collections in Matsuyama were taken from 51 trap nights, whereas those at Fukuoka were taken from only 29 trap nights.

c. At Matsuyama 307 specimens of Cremastus biguttatus Munakata, a species of wasp parasite of the stem borer, were collected. This species appeared in such smaller numbers in the Fukuoka collections.

d. These data confirm conclusions drawn in the previous report; collections of rice borer moths are so small that the result is negligible and the high percentage of beneficial insects taken, though subject to a more critical study, makes the effectiveness of light traps highly questionable.

21



## 2. Control of Rice Stem Borers

a. Informed Mr. S. Katayanagi, vice-minister, and other officials of the Ministry of Agriculture and Forestry that Natural Resources Section has studied rice stem borer control for the past three years, and every indication has been that light traps are practically valueless in controlling the stem borer. Natural Resources Section strongly urged that the Ministry of Agriculture and Forestry discontinue publicity favoring light traps. Also recommended that after 30 June 1949 no critical materials be allocated for the installation of light traps. Also recommended that after 30 June 1949 no critical materials be allocated for the installation of light traps. Suggested that experiments involving the use of BHC (benzene hexachloride) and DDT in the control of stem borers be emphasized. As soon as practicable, the Ministry should determine how these materials may be most effectively and economically used in controlling the insect.



**INSECTICIDES AND FUNGICIDES**

**1. Efficiency of Insecticide Light Trap**

a. American entomologists have proved that the basic theory of the use of light traps for insect control is unsound, and the use of light traps for anything but survey collections has been practically discontinued in the United States.

b. However, research on light traps has been done in Japan not to determine their value, but to improve their insect-collecting powers. Japanese entomologists doing research work on light traps for the control of rice borers have continued to develop traps for that purpose, observing only those species and ignoring the remainder of the catch. Millions of yen are spent annually to install new light traps.

c. To obtain the true picture Natural Resources Section requested two research institutions to take the catch at a light trap and separate and identify the specimens collected. Lack of personnel prevented the use of daily collections, but one collection to be made each week throughout the trap season was agreed upon.

d. Drs T. Usaki and K. Yasumatsu, entomologists at the University of Kyushu, Fukuoka, and their staff, conducted the work at one station. Their report has been presented, but the report from the agricultural college at Matsuyama, Ehime Prefecture, has not yet been received.

e. The following table summarizes the results reported by the University of Kyushu entomologists:

**LIGHT TRAP CATCH**

<u>Insect Order</u>	<u>Insects Collected</u>		
	<u>Beneficial</u>	<u>Injurious</u>	<u>Neutral</u>
Coleoptera (beetles)	176,320	1,370	360
Hemiptera (bugs)	1,816	601	0
Homoptera (aphids, leafhoppers, & allies)	0	2,416	0
Diptera (flies)	4	2,686	1,283
Lepidopter (moths)	0	3,586	0
Hymenoptera (bees and wasps)	100	2,308	16
Trichoptera (caddis flies)	883	0	0
Orthoptera (grasshoppers and crickets)	0	157	0
Ephemeroptera (May flies)	116	0	0
Isoptera (termites)	0	9	0
Dermaptera (earwigs)	0	3	0
Odonata (dragonflies)	2	0	0
Neuroptera (lace-winged flies)	1	0	0
Plecoptera (stoneflies)	1	0	0
<b>TOTAL</b>	<b>179,243</b>	<b>13,116</b>	<b>1,659</b>

Xv



f. More than 92 percent of the insects taken were beneficial species, that is, they are either scavengers or predaceous or parasitic species. Each species could not be examined individually regarding its host, but groups were used. Importance of individual insects also depends somewhat on size of the individual, but importance of beneficial or injurious species, in relation to size, is probably relatively balanced. The largest catch was 168,552 beetles of a small hydrophilid (water scavenger beetle), but many of the large species, as well as dytiscids (predaceous diving beetles), were also taken. Most of the beneficial insects were aquatic species. These are important in rice paddy areas as predaceous beetles in the destruction of mosquito larvae. The scavengers do a great service in preventing pollution in paddy water.

g. The largest number of Homoptera consist of leafhoppers of a single rice-infesting species, but the collection is insignificant on the basis of control. The same is true of the Diptera. More than 2,000 specimens of Cecidomyiidae (gall gnats), not identified to species, may be presumed to infest rice. The injurious Hymenoptera collected were of swarming ants nearly all collected on a single night.

h. The order of most interest is the Lepidoptera (butterflies and moths). It has long been assumed that moths are nocturnal insects, abundantly attracted to lights, which is undoubtedly the reason for the great interest in light traps. Less than two percent of the total number of insects collected were moths. It can be assumed that all the moths are injurious.

i. The two species of most interest are Chilo simplex Butler (rice stem borer) and Schoenobius instertellus Wlk (paddy borer). Both species are found in the study areas. There were 235 and 110 respectively of these species collected, or less than .02 percent of the total catch.

j. This report confirms other evidence that light traps catch a preponderance of beneficial insects, and that instead of being recommended for insect control, their use should be discouraged. There is no way to determine the number of rice borers in the area of influence of the light trap, but if the collection studied is a fair sample, about 2,415 moths should have been collected during the season. With a one-percent infestation this catch would represent less than 10 percent of the moths from one tan  $\frac{3}{4}$  of rice paddy. Each light is reported to collect moths from 5 cho. Obviously, the catch of rice borer moths was insignificant.



HEADQUARTERS  
KUMAMOTO MILITARY GOVERNMENT TEAM  
KUMAMOTO, KYUSHU, JAPAN

GKB/rtu

729.5APO 24 Unit 1  
6 June 1949

**SUBJECT: Control of Pine Bark Beetle**

**THRU : Commanding Officer, Kyushu Military Government Region,  
Headquarters and Headquarters Detachment, APO 24 Unit 5**

**TO : Natural Resources Section, GHQ, SCAP, APO 500  
ATTN: Forestry Division**

1. Inclosed herewith are the results of an experiment carried out by the Kumamoto Branch of the Forestry Experiment Station of the Ministry of Agriculture and Forestry on the use of C.E.T. in the eradication of Pine Bark Beetle, also an experiment carried out by Seibu Oil Company.

2. It is felt that this solution will help greatly in preventing the spread of Pine Bark Beetle and should be investigated by a competent authority.

FOR THE COMMANDING OFFICER:

2 Incls:

1. Results of Experiment,  
Kumamoto Branch of Forestry Experiment Station
2. Results of Experiment,  
Seibu Oil Company

JOHN C. BARRONTON  
1st Lt           Inf  
Adjutant



**BASIC:** Ltr, Hq Kumamoto Mil Govt Team, APO 24-1, dtd 6 June 49,  
subj: "Control of Pine Bark Beetle".

1st Ind

ERM/msw

KYUSHU MIL GOVT REGION, HQ & HQ DET, APO 24-5, 17 June 49

THRU: Commanding General, Hq I Corps, APO 301

TO : Natural Resources Section, GHQ, SCAP, APO 500  
Attn: Forestry Division

Forwarded for information and study.

FOR THE COMMANDING OFFICER:

2 Incls:  
n/c

HENRY E. RAINBOLT, JR  
1st Lt FA  
Ass't Adjutant

AG 729.5 - BA

2nd Ind

CET/wd/af

Hq I Corps, APO 301, 25 Jun 1949

TO: CG, Eighth Army, APO 343

1. Forwarded in compliance with telephonic request by Mr. Heineman, Natural Resources Branch, Military Government Section, your headquarters.

2. It is suggested that further study by higher headquarters be made on this project.

FOR THE COMMANDING GENERAL:

2 Incls:  
n/c

CHARLIE RAMSEY  
CWO USA  
Asst Adj Gen



AGNGEN 729.5 3rd Ind  
 SUBJECT: Control of Pine Bark Beetle (6 June 1949)

Headquarters Eighth Army, APO 343, 30 Jun 1949

TO: Supreme Commander for the Allied Powers, APO 500  
 (Attn: Forestry Div., NRS)

This correspondence is forwarded in accordance with the verbal request made by Lt Col. Donaldson, your headquarters on 10 June 1949.

FOR THE COMMANDING GENERAL:

2 Incl:  
 n/c

J. A. O'BRIEN  
 CWO USA  
 Asst Adj Gen

AG 091.33 (6 June 49) NR/Fo 4th Ind

GENERAL HEADQUARTERS, SUPREME COMMANDER FOR THE ALLIED POWERS,  
 APO 500, 14 July 1949

TO: Commanding General, Eighth Army, APO 343

1. On the basis of the inclosed report, the results are too inconclusive to warrant extensive use or publication of this method. The duration of the experiment was far too short; it was confined to but one period of the year; check logs were practically uninfested compared to the treated logs.

2. Many questions remain to be answered, for example:
- a. Effects of sun and rain on the insecticide after application.
  - b. Comparative costs with other methods.



AG 091.33 (6 June 49)NR/Fo, 14 Jul 49, 4th Ind  
SUBJECT: Control of Pine Bark Beetle

- c. Effect on living trees
- d. Toxicity on plants and animals
- e. Fire hazard involved

3. This experiment should be considered only as a preliminary one with much experimentation remaining to be done before advocating its use. It is possible that this project will be considered by entomological representative of the Ministry of Education of the Japanese Government in the distribution of a special research fund under its administration.

BY COMMAND OF GENERAL MacARTHUR:

2 Incls:  
w/d

/s/Donald McLeod  
DONALD McLEOD  
Captain, CAC  
Actg Asst Adj Gen

AGMGEN 729.5

5th Ind

JUL 18 1949

Headquarters Eighth Army, APO 343

TO: Commanding General, I Corps, APO 301

J.A.O'B

AG 729.5 - BA

6th Ind

TJQ/wd/yn

Hq I Corps, APO 301.

JUL 25 1949

TO: CO, Kyushu Civil Affairs Region, APO 24-5

Your attention is invited to the 4th indorsement.

BY COMMAND OF MAJOR GENERAL COULTER:

Charles Ramsey  
C. W. B. U.S.A.  
Actg Adj Gen



CENTRAL FILE

BASIC: Ltr Hq Kumamoto Mil Govt Team, APO 24-1, dtd 6 June 1949,  
subj: "Control of Pine Bark Beetle".

7th Ind

ERM/msw

KYUSHU CIVIL AFFAIRS REGION, HQ & HQ DET, APO 24-5, 29 July 49

TO: Commanding Officer, Kumamoto Caff Team, APO 24-1

Attention invited to 4th indorsement.

BY ORDER OF COLONEL HILTON:

HENRY E. RAINBOLT, JR  
1st Lt FA  
Adjutant



HEADQUARTERS  
KUMAMOTO MILITARY GOVERNMENT TEAM  
KUMAMOTO, KYUSHU, JAPAN

GKB/rtu

729.5APO 24 Unit 1  
6 June 1949

SUBJECT: Control of Pine Bark Beetle

THRU : Commanding Officer, Kyushu Military Government Region,  
Headquarters and Headquarters Detachment, APO 24-5TO : Natural Resources Section, GHQ, SCAP, APO 500  
ATTN: Forestry Division

1. Inclosed herewith are the results of an experiment carried out by the Kumamoto Branch of the Forestry Experiment Station of the Ministry of Agriculture and Forestry on the use of C.E.T. in the eradication of Pine Bark Beetle, also an experiment carried out by Seibu Oil Company.

2. It is felt tha this solution will help treatly in preventing the spread of Pine Bark Beetle and should be investigated by a competent authority.

FOR THE COMMANDING OFFICER:

2 Incls:

1. Results of Experiment,  
Kumamoto Branch of Forestry  
Experiment Station
2. Results of Experiment,  
Seibu Oil Company

JOHN C. BARRONTON  
1st Lt            Inf  
Adjutant







REPORT ON AN INSECTICIDE EXPERIMENT AGAINST PINE ROOT WORMS

Examiner: The Kumamoto Branch Office of the Forestry Experimental Station of the Agricultural and Forestry Ministry

1. Inventor of the Insecticide:

Izumi Yoshinari, 661 Hanazono-machi, Kumamoto City

2. Name of Insecticide: C.E.T.

3. Place of Examination:

In compounds of the Kumamoto Branch Office of the Forestry Experimental Station, Kyomachi, Kumamoto City

4. Date of Examination: April 15 to May 13, 1949

5. Method of Examination:

A pine tree infected with *Cryptorrhynchus insidiosus*, *Myelophilus piniperda* and *Cryphalus fulvus* felled in autumn of 1948 was cut to pieces 3.3 feet long, Part of the pieces were sprayed and others dipped in liquid insecticide, and left for 25 days.

A. Pieces that were sprayed:

Twelve pieces were put on the ground and were sprayed on the bark with aerosol sprayer of the Ueki type. After that it was left among the shade for 25 to 28 days.

B. The pieces that were dipped:

Ten pieces with their barks on were dipped in a 15 gallon casks containing 18 litres of the liquid insecticide, After that, it was taken out and set among the trees. Some pieces were not dipped to make comparisons.

6. Result of Investigation:

After leaving the sprayed or dipped pieces for 25 or 28 days we took each piece and peeled the barks very carefully, the results which are as follows:

Of the total *Myelophilus piniperdas*, only 1% were found alive in the three pieces marked No. 5, No. 7 and No. 10.

*Cryphalus fulvus* were found completely destroyed except a few on piece No. 12.



LIST OF THE RESULTS

THE AREA THAT MEDICINE WERE SPREAD

No. of Tree Tested	Diameter (cm)	Thickness of bark (cm)	Volume of wood (3 m)	Myelophilus piniperda						Eff
				Larva		Imago		Total		
				Alive	Dead	Alive	Dead	Alive	Dead	
1	42	1.3	0.148	0	20	0	6	0	26	
2	40	1.0	0.135	0	279	0	0	0	279	
3	36	1.0	0.110	0	543	0	0	0	543	
4	36	1.0	0.110	0	460	0	0	0	460	
5	32	0.8	0.087	3	370	0	0	3	370	
6	28	0.7	0.068	0	1058	0	0	0	1058	
7	26	0.6	0.059	13	1589	0	0	13	1589	
8	21	0.5	0.043	0	1854	0	6	0	1860	
9	18	0.5	0.029	0	2338	0	0	0	2338	
10	14	0.5	0.018	11	2495	0	0	11	2495	
11	5	0.2	0.005	0	226	0	0	0	226	
12	6	0.2	0.005	0	423	0	1	0	424	
TOTAL			0.817	27	11655	0	13	27	11668	

INFECTED AREA

1	36	1.0	0.110	0	330	0	1	0	331	
2	34	1.0	0.098	0	462	0	7	0	469	
3	30	1.0	0.077	0	1146	0	0	0	1146	
4	25	0.6	0.059	0	1629	0	8	0	1637	
5	20	0.5	0.036	0	2154	0	8	0	2162	
6	16	0.5	0.023	0	2532	0	8	0	2540	
7	13	0.5	0.018	0	1424	0	9	0	1433	
8	10	0.5	0.010	5	913	0	3	5	916	
9	6	0.2	0.005	0	296	0	0	0	296	
10	6	0.2	0.005	0	0	0	0	0	0	
TOTAL			0.441	5	10886	0	44	5	10930	



**OF THE RESULTS**

**MEDICINE WERE SPREAD**

Cryphalus fulvus					Cryptorrhynchus insidiosus				
C. piniperda					Larva				
Age	Imago		Total	Efficiency	Imago		Efficiency		
	Dead	Alive			Alive	Dead			
	6	0	26	100%	0	0	12	177	94%
	0	0	279	100%	0	0	8	185	96%
	0	0	543	100%	0	0	2	49	96%
	0	0	460	100%	0	0	6	67	92%
	0	3	370	99%	0	0	0	42	100%
	0	0	1058	100%	0	0	2	23	92%
	0	13	1589	99%	0	0	1	12	92%
	6	0	1860	100%	0	0	0	0	0
	0	0	2338	100%	0	0	0	0	0
	0	11	2495	99%	0	0	0	0	0
	0	0	226	100%	0	0	0	0	0
	1	0	424	100%	0	6	0	0	0
	13	27	11668	100%	0	6	31	545	95%

**CTED AREA**

	1	0	331	100%	0	0	0	64	100%
	7	0	469	100%	0	0	0	50	100%
	0	0	1146	100%	0	0	0	29	100%
	8	0	1637	100%	0	0	0	9	100%
	8	0	2162	100%	0	0	0	0	0
	8	0	2540	100%	0	0	0	0	0
	9	0	1433	100%	0	0	0	0	0
	3	5	916	99%	0	0	0	0	0
	0	0	296	100%	0	16	0	0	0
	0	0	0	0	0	4	0	0	0
	44	5	10930	100%	0	20	0	152	100%



us ciency	Cryptorrhynchus insidiosus			TOTAL			Remark
	Larva			Larva			
	Alive	Dead	Efficiency	Alive	Dead	Efficiency	
	12	177	94%	12	203	94%	Trunk
	8	185	96%	8	454	98%	"
	2	49	96%	2	592	100%	"
	6	67	92%	6	527	99%	"
	0	42	100%	3	412	99%	"
	2	23	92%	0	1081	100%	"
	1	12	92%	14	1601	99%	"
	0	0	0	0	1860	100%	"
	0	0	0	0	2338	100%	"
	0	0	0	11	2495	100%	"
	0	0	0	0	226	100%	Branch
	0	0	0	0	430	100%	"
	31	545	95%	58	12219	100%	
	0	64	100%	0	395	100%	Trunk
	0	50	100%	0	519	100%	"
	0	29	100%	0	1175	100%	"
	0	9	100%	0	1646	100%	"
	0	0	0	0	2162	100%	"
	0	0	0	0	2540	100%	"
	0	0	0	0	1433	100%	"
	0	0	0	5	916	99%	"
	0	0	0	0	312	100%	Branch
	0	0	0	0	4	100%	"
	0	152	100%	5	11107	100%	



LIST OF THE RESULTS

No. of Tree Tested	Diameter (cm)	Thickness of bark (cm)	Volume of wood (3m)	COMPARATIVE AREA					
				Myelophilus piniperda					
				Larva		Imago		Total	
Alive	Dead	Alive	Dead	Alive	Dead				
1	16	0.7	0.023	0	0	0	0	0	0
2	5	0.2	0.005	184	0	0	0	0	0
TOTAL			0.028	184	0	0	0	0	0

TOTAL LIST OF THE THREE AREAS

TEST AREA	MYELOPHILUS PINIPERDA			CRYPHALUS FULVUS			CRYPTO
	Alive	Dead	Efficiency	Alive	Dead	Efficiency	Alive
The Area That Medicine Were Spread	27	11668	100%	0	6	100%	31
Infected Area	5	10930	100%	0	20	100%	0
Comparative Area	184	0	0	13	0	0	53



LIST OF THE RESULTS

COMPARATIVE AREA

Myelophilus piniperda					Cryphalus fulvus			Cryptorrhynchus		
Larva	Imago		Total		Efficiency	Imago		Efficiency	Larva	
	Dead	Alive	Dead	Alive		Dead	Alive		Dead	Alive
0	0	0	0	0	0	0	0		53	0
0	0	0	0	0	0	13	0		0	0
0	0	0	0	0	0	13	0		53	0

TOTAL LIST OF THE THREE AREAS

Area	CRYPHALUS FULVUS			CRYPTORRHYNCHUS INSIDIOSUS			TOTAL		
	Alive	Dead	Efficiency	Alive	Dead	Efficiency	Alive	Dead	Efficiency
	0	6	100%	31	545	95%	58	12219	100%
	0	20	100%	0	152	100%	5	11107	100%
	13	0	0	53	0	0	250	0	0



us	Cryptorrhynchus insidiosus			TOTAL			Remark
	Larva		Efficiency	Larva		Efficiency	
	Alive	Dead		Alive	Dead		
ciency	53	0	0	53	0	0	Trunk
	0	0	0	197	0	0	Branch
	53	0	0	250	0	0	

Efficiency
100%
100%
0



DECLASSIFIED E.O. 12958 SECTION 5.102/1000

Cryptorrhynchus Insidiosus were found dead on piece No. 5. However on pieces which had a bark thickness of 0.6 cm or over contained 4 to 8 percent alive ones. Pieces with bark thickness of 0.5 cm or below did not contain alive ones. Those that were alive were found in the parts of harder barks such as the joints of branches which were hard to saturate.

The liquid was found to have effect even after leaving it for 28 days after spraying.

The death rate was a 100% except on Pieces No. 1 with 94% No. 2 with 98%, No. 4, No. 5, and No. 7 with 99% respectively.

Insects in the dipped pieces were found completely killed with only 1% found alive on piece No. 8.

On the contrary, all insects including Myelophilus Piniperda and Cryptorrhynchus Insidiosus were found alive on pieces that were not dipped or sprayed.

Judging from the results of the investigation mentioned above we feel that the insecticide is very effective in killing all kinds of insect living in the phloem of trees. It will not effect the quality of the logs.



RESULTS OF C.E.T. (INSECTICIDE) AGAINST PINE-EATING  
VERMIN AS TO ITS KILLING VIRTUE AND MEDICAL EVIL EFFECTS

Tested by: The Seibu Oil Co.  
Address : No. 30, Karashima-cho  
Kumamoto City

1. C.E.T. Field Test (as to its killing virtue);

a. Name of noxious vermin:

Larvae of Cryphalus fulous and Myelo-philus piniperda

b. Method:

The tree that was put to test was an affected pinus thunbergii, (black pine) 4 meters long, 15 centimeters in diameter and the average thickness of the bark was 7.5 m/m. Leaving 1 meter from the lower part of the log (herein after referred to as A), the remaining other part 3 meters long ( hereinafter referred to as B) was tested without peeling the bark. Through a hand-driven compressed sprayer packed with 1.4 litres of C.E.T. was sprayed over B section and was allowed to permeate the bark thoroughly.

The affected pine log was left in this condition for two weeks. The total amount of C.E.T. used for this experiment was 0.98 litre.

c. Dates of experiments, observation and place:

Date of test: 17 February 1949

Date of observation: 2 March 1949

Place of test: In the privately owned forest at Shimo-Matsukuma-mura, Yatsushiro-gun, Kumamoto-ken

d. Method of survey:

By barking off the local part of A&B, little by little and then by barking off the whole parts of A & B, the permeating and killing conditions were examined.

e. Results:

<u>Section</u>	<u>No. of Vermin Picked Up</u>	<u>Dead</u>	<u>Seriously Affected</u>	<u>Not Affected</u>	<u>Rate of Killing</u>
A	38	2	1	35	5%
B	92	91	1	-	99%



DECLASSIFIED E.O. 12958 SECTION 5 (b) (7) (D)

TABLE OF INGREDIENTS OF C.E.T.

<u>Items</u>	<u>Content rate</u>
Pine-Root Telebene Oil -----	94.9%
Ethyl Lead Tetrachloride -----	5 %
Piretoline -----	0.1%

Besides these items, DDT, BHC, Chlorpicrin and other publicly known insecticides will be added, when necessary.

Note 2 KILLING VIRTUE & MEDICAL EVIL EFFECTS OF C.E.T.

Quite different from the hitherto used soluble farming insecticides, this medicine has 100% killing power with its most effective osmotic force, as stated in the test certificate issued by the Kumamoto Branch Office, Forestry Experimental Station of the Agriculture & Forestry Ministry.

Note 3. PRESCRIPTION OF C.E.T.

Cut down the affected tree, don't peel the barks of the tree apply C.E.T. directly to the surface of the bark by a hand-driven compressed sprayer. Leave in this condition for a period of over ten days.



DECLASSIFIED BY: 12303 SECTION 5.102, 1005  
BASIC: Ltr, Hq Kumamoto Mil Govt Team, APO 24-1, dtd 6 June 49,  
subj: "Control of Pine Bark Beetle",

1st Ind

ERM/msw

KYUSHU MIL GOVT REGION, HQ & HQ DET, APO 24-5, 17 June 49

THRU: Commanding General, Hq I Corps, APO 301

TO : Natural Resources Section, GHQ, SCAP, APO 500  
Attn: Forestry Division

Forwarded for information and study.

FOR THE COMMANDING OFFICER;

2 Incls:  
n/c

HENRY E. RAINBOLT  
1st Lt FA  
Ass't Adjutant



1st Lt. Kyushu Mil Govt Region, APO 929, subj: "Pine Bark Beetle Control",  
Dtd 17 Jan 49, cont'd.

KYUSHU MILITARY GOVERNMENT REGION  
HEADQUARTERS AND HEADQUARTERS DETACHMENT

RWO/tn

3. Many delegates from Fukuoka, Kyushu, Japan in order to be effective, private  
owners should be required to exterminate bark beetles on their own lands or suf-  
fer definite penalties. Doubt was expressed on a proposal APO 929 permit owners  
to refer their infected trees to the mayors for action. 17 January 1949  
from the trees cut to be retained by the government as reimbursement. It is  
SUBJECT: Pine Bark Beetle Control and it profitable to follow this plan, and  
the mayor would be unable to cope with the amount of labor required.

THRU 4. Commanding General, I Corps, APO 301  
attached ATTN: Civil Govt Section

5. Inclosure 2 is detailed report of proceedings of conference. Special  
TO attention: Supreme Commander of the Allied Powers, APO 500  
delegates ATTN: Natural Resources Section

FOR THE COMMANDING OFFICER:

1. On 21 December 1948 a conference was held at Beppu City, Oita  
Prefecture to discuss progress made against Pine Bark Beetles in Kyushu,  
methods employed and future plans to improve the control campaign. Attending  
were representatives of the forestry section, Central Government, each prefec-  
ture in Kyushu, Kumamoto Regional Land Office and Natural Resources  
officers of Kyushu Military Government Region and Oita Military Government  
Team.

AB 729.5 - Ba 1st ind ELT/tn  
2. It was disclosed that the most serious bottlenecks to an increased  
rate of extermination are principally in private forest lands and are as  
follows:

To: CG, Eighth Army, APO 343  
a. Lack of cooperation of private forest owners.  
Attention is invited to paragraph 2, basic communication.  
Each Ken Government carries out the campaign of extermination  
in private forests, but at present there is no legal authority to force  
private forest owners to comply with instructions and suggestions. Many  
are reluctant to cooperate even though 50% of the expense is subsidized by  
the government.

2 Incls:  
a/c b. The small percent of budget allowed for field trips by Ken  
officials: /s/ Wilder A. Johnson  
/t/ WILDER A. JOHNSON  
Asst Adj Gen

- Only 2.5% of the budget is permitted to be used for field trips by  
officials. In order to supervise and encourage the program it is essential that  
the private forest owners, village, and town officials be frequently contacted  
and advised. The present limitation of funds permits few extensive field  
trips.

c. Danger of forest fires caused by burning bark.

Infected trees are often located in dense wooded areas and removal  
to safe areas for burning is time consuming, if not entirely impossible.



Ltr, Kyushu Mil Govt Region, APO 929, subj: "Pine Bark Beetle Control",  
dtd 17 Jan 49, cont'd.

3. Many delegates present felt that, in order to be effective, private owners should be required to exterminate bark beetles on their own lands or suffer definite penalties. Doubt was expressed on a proposal to permit owners to refer their infected trees to the mayors for action with proceeds obtained from the trees cut to be retained by the government as reimbursement. It is believed too many owners would find it profitable to follow this plan, and the mayor would be unable to cope with the amount of labor required.

4. Report of progress made in extermination of bark beetles in Kyushu is attached as inclosure 1.

5. Inclosure 2 is detailed report of proceedings of conference. Special attention is invited to Section 4, page 6, giving list of suggestions by delegates to improve the program.

FOR THE COMMANDING OFFICER:

2 Incls:  
As stated.

/s/ Charles L. Bachtel  
/t/ CHARLES L. BACHTEL  
1st Lt., Sig C  
Adjutant

AG 729.5 - BA

1st Ind

ELT/an

Hq I Corps, APO 301, 26 Jan 49

TO: CG, Eighth Army, APO 343

Attention is invited to paragraph 2, basic communication.

FOR THE COMMANDING GENERAL:

2 Incls:  
n/c

/s/ Wilder A. Johnson  
/t/ WILDER A. JOHNSON  
Capt., AGD  
Asst Adj Gen



AGMGEN 729.5 2nd Ind  
SUBJECT: Pine Bark Beetle Control (17 January 1949)

Headquarters Eighth Army, APO 343, 3 Feb 49

TO: Supreme Commander for the Allied Powers, APO 500  
(Attn: Natural Resources Section, Forestry Div)

1. Forwarded for your information is a report from Kyushu Military Government Region concerning bottlenecks in the extermination of pine bark beetles on private forest lands in Kyushu.

2. Particular attention is invited to paragraph 2 of the basic communication and section 5, page 7 of inclosure 2. Information is requested concerning the proposed legislation or plans of the Ministry of Agriculture and Forestry which will enforce control measures on the pine bark beetle epidemic.

FOR THE COMMANDING GENERAL:

2 Incls:  
n/c

/s/ Monroe N. Hiney  
/t/ MONROE W. HINEY  
Major, AGD  
Asst Adj Gen

AG 091.33 (17 Jan 49) NR/Fo 3d Ind

GENERAL HEADQUARTERS, SUPREME COMMANDER FOR THE ALLIED POWERS, APO 500,  
7 March 1949

TO: Commanding General, Eighth Army, APO 343

1. Kyushu Military Government Region is to be commended for the constructive interest shown in the pine bark beetle control program. The island of Kyushu has suffered and is suffering great damage because of the bark beetle epidemic. One-half of the damage for all Japan has occurred in Kyushu. Miyazaki and Nagasaki prefectures are among those where the loss has been the greatest in Japan.

2. Conditions referred to in paragraph 2, basic communication, as seriously handicapping control, are common to the program as a whole. A discussion of those listed follows:

a. "Lack of cooperation of private forest owners." In many localities local bark beetle control action committees have been formed for the purpose of coordinating and otherwise facilitating bark beetle control activities. Such committees are composed of representatives of central and prefectural government, of forest land owners, manufacturers and users of



AG 091.33 (17 Jan 49)NR/Fo, 7 Mar 49, 3d Ind  
Subj: Pine Bark Beetle Control

forest products, educators, and other interested persons. Such committees can help in instances of indifferent forest owners, owners who are financially unable to carry out treatment, and non-resident owners who may not be informed of conditions on their land. Formation and active support of bark beetle control committees are the best known means of bringing about coordination of control efforts.

b. Small percent of budget allowed for field trips by prefectural officials. Basic communication reported that only 2½ percent of the budget could be used for field trips by officers. The Bureau of Forestry, Ministry of Agriculture and Forestry reports that the percentages for five Kyushu prefectures are now as follows:

Saga	3.5 percent	Oita	3.3 percent
Nagasaki	3.1 "	Miyazaki	3.0 "
Kanamoto	5.8 "		

Kagoshima reported that they had sufficient funds left over from previous appropriations. Fukuoka at first declined the fourth quarter central government subsidy appropriation but later asked that it be restored.

c. Danger of forest fires caused by burning bark. The burning of bark from infested trees presents a serious problem during certain portions of the year. Care will have to be exercised since the best method is peeling and burning. Local forest officers recognize this hazard and in the main, meet it effectively, through taking necessary safeguards and precautions. Fire danger is often minimized by killing eggs, larva and adult beetles by using an oil insecticide spray on the bark after it has been peeled off or by exposing the inner side of the bark containing eggs and larva to the direct rays of the sun. It is advisable to insure that control crews have a knowledge of and that they practice proper fire precautions in connection with beetle control activities. Burning should not be carried on during periods of high fire danger, a fire line should be dug surrounding the spots where bark is to be burned, and local public forestry agencies should be contacted and their detailed fire precaution instructions carefully followed.

3. The Bureau of Forestry, Ministry of Agriculture and Forestry has drafted a law designed to bring about prompt and effective treatment of infested trees by forest owners. The proposal is now under consideration by the Forestry Division, Natural Resources Section, General Headquarters, Supreme Commander for the Allied Powers and the various Japanese Governmental agencies that must pass on it before it is submitted to the Diet. An aroused local public sentiment would afford a supplementary approach.

4. The following measures have proved helpful in various localities in the bark beetle control campaign:



AG 091.33 (17 Jan 49) NR/Fo, 7 Mar 49, 3d Ind  
Subj: Pine Bark Beetle Control

- a. The designation of "joint control month"
- b. Formation of strong local control action committees to plan and coordinate control activities
- c. Organization of fire crews, youth groups, upper school students and others as reporting and treatment forces
- d. Publicity by radio, press, poster, leaflets, rallies, conferences and the like, to point up the local economic importance of pine and the urgency of bark beetle control
- e. Strict enforcement of the embargo against the movement of unpeeled pine logs from infested areas. (See page 23, Natural Resources Section Weekly Summary 138, 30 May - 5 June 1948 and attached Item 6.)

5. Under present requirements that the budget be balanced, it is difficult to see how the central government can be expected to increase further the amount of subsidy paid forest owners who treat infested trees. More emphasis must be placed on local self-help with maximum cooperation between private forest owners and local prefectural and national groups.

6. The Bureau of Forestry has assigned a well qualified man, Mr Y. Hidaka, Kumamoto National Forest Regional Headquarters (Kumamoto Eirin Kyoku) to inspect and advise on bark beetle control operations in Kyushu. It is suggested that requests for assistance in bark beetle control matters be addressed to the Kumamoto Regional Headquarters in order to expedite local action.

BY COMMAND OF GENERAL MacARTHUR:

2 Incls:  
w/d

/s/ J. W. Williams  
/t/ J. W. WILLIAMS  
Major, AGD  
Asst Adj Gen



AGDEN 729.5 4th Ind  
SUBJECT: Pine Bark Beetle Control (17 January 1949)

14 MAR 1949

Headquarters Eighth Army, APO 343

TO: Commanding General, I Corps, APO 301

Your attention is invited to the preceding indorsement.

BY COMMAND OF LIEUTENANT GENERAL WALKER:

MONROE N. HINEY  
Major AGD  
Asst Adj Gen

AG 729.5 - BA

5th Ind

MAR 17 1949

EHN/ay

Hq I Corps, APO 301,

TO: CO, Kyushu Mil Govt Region, APO 24-5

Your attention is directed to the 4th indorsement.

BY COMMAND OF MAJOR GENERAL COULTER:

A. SEIPEL  
Lt Col, AGD  
Asst Adj General



GENERAL HEADQUARTERS  
SUPREME COMMANDER FOR THE ALLIED POWERS  
Natural Resources Section

HGS/WHL/JHB/RR/1s  
18 January 1949

NR 336 (18 Jan 49)A

MEMORANDUM FOR: Record

SUBJECT: Benzene Hexachloride for Rice Stem Borer Control

1. Authorization: CPLO 310-14, 5 November 1948.
2. Mission: To establish isolated rice areas for field tests of straw treatment for rice stem borer control on a field basis in comparison with the light trap method. A continuation of program reported in Memorandum for Record NR 336 (4 Nov 48)A, subj: same as above.
3. Personnel: Mr Raymond Roberts, Scientific Consultant, and Mr S. Ebi, Interpreter, NR/A; Mr N. Hatai, representative, National Experiment Station, Nishigahara.
4. Observations and Conclusions:
  - a. Plan for treatment and program for field experiment on rice borer (Incl 2).
  - b. Satisfactory arrangements were made to carry out the prescribed form of experiments with four of the six prefectures. The problem in Kochi Prefecture is sufficiently different so that special recommendations were made in that prefecture, as indicated later. Satisfactory locations were not found in Aichi Prefecture, and a cooperative experiment there was abandoned with the understanding that the Experiment Station could solicit support of the Ministry of Agriculture and Forestry to carry on their own program, unsupported by NR recommendation.
  - c. Two areas were selected on Shiga-shima peninsula in Fukuoka Bay, Katsuma village. Approximately 15 cho for treatment and a small isolated plot of 7.5 tan for light traps were chosen. All straw is annually removed from this latter area but stubble count on two clusters showed three larvae, or about eight percent stubble infestation. No straw will be brought back into the area and trap collections will depend entirely on larvae wintering in the stubble.

Incl 13



DECLASSIFIED E.O. 12958 SECTION 5 (C) 2011/05/01  
NR 336 (18 Jan 49)A

d. The National University at Fukuoka, where studies were being conducted on light trap collections, was visited. The report has not been received, but thousands of beneficial insects were taken and relatively few stem borer moths. Over 186,000 specimens of a single species of small water scavenger-beetles were taken on a single night.

e. Report was received at Miyazaki that farmers who installed light traps late were still burning them in mid-November, at least a month after borer moths had disappeared, the explanation being that farmers wanted to try them out. Locations in Miyazaki are along the beach in Nojima Village. Three locations were selected, two to be used according to plan, the third, where no straw remains until spring to have all stubble destroyed. In order to obtain agreement on this last program some extra fertilizer had to be promised to replace the stubble destroyed. All areas are small but quite well isolated and should furnish good records.

f. Two sites, not too thoroughly isolated, were selected in Ehime Prefecture, Naki-akata, Hakata Village. Cooperation appears to be excellent.

g. The stem borer is not a predominant species in most of Kochi Prefecture, but where it appears it is three brooded instead of two. The paddy borer does the major damage there. Since it is reported by the Japanese to live over entirely in rice stubble, elimination of this stubble two or three years in five should efficiently control this species. Attempts at control have been made using light traps similar to the stem borer. In Uma-no-ue Village, light trap records have been kept in the village office. Large numbers of moths are collected but the infestation averages 20 to 50 percent or more in spite of these traps. Here incandescent and fluorescent traps light up the night. Village records were requested but have not been received. Experiments were suggested for chemical treatment of stubble at Uma-no-ue, but it appears that the more practical plan would be periodic and complete elimination of all stubble. An attempt will be made to conduct such a program in the fall of 1949 with Military Government support.

h. Satisfactory sites were not located in Aichi Prefecture and arrangements had apparently been made which were not acceptable. Aichi is not included in the plan.

i. Two small isolated areas on the Izu Peninsula were selected in Shizuoka Prefecture, Nishiura Village. Farmers are not dependent upon rice, the main crop being citrus. Cooperation is excellent in this area.



NR 336 (18 Jan 49)A

j. Report was made that a farmer in Wakayama is raising large yields of Burma rice with little fertilizer, and apparent insect resistance. This report justifies further investigation.

*Raymond Roberts*

2 Incls

1. Itinerary and Persons Interviewed
2. As indic in para 4a above

RAYMOND ROBERTS  
Scientific Consultant  
Agriculture Division

Copies furnished:

- Kyushu MG Region - APO 929
- Fukuoka MG Team - APO 929
- Miyazaki MG Team - APO 24
- Shikoku MG Region - APO 1050
- Chine MG Team - APO 1050
- Kochi MG Team - APO 1050
- Tokai-Hokuriku MG Region - APO 710
- Aichi MG Team - APO 710
- Shizuoka MG Team - APO 1007



DECLASSIFIED E.O. 12958 SECTION 3 (C) 2027/MSB/NO. 1

ITINERARY

Left Tokyo 0930 7 November; arrived Hakata 1245 8 November.  
Left Hakata 0759 11 November; arrived Miyazaki 1950 11 November.  
Left Miyazaki 0824 14 November; arrived Matsuyama (via Okayama, Uno, and Takamatsu) 1639 15 November.  
Left Matsuyama 0815 18 November; arrived Kochi 1530 18 November.  
Left Kochi 1248 20 November; arrived Nagoya 2356 21 November (via Takamatsu, Uno, and Okayama).  
Left Nagoya 1203 24 November; arrived Shizuoka 1531 same day.  
Left Shizuoka 0800 25 November (by prefectural car); arrived Nagaoka 1400 25 November.  
Left Nagaoka 1645 26 November; arrived Tokyo 1855 26 November.

PERSONS INTERVIEWED

Military Government personnel:

Col S. C. Hilton, C. O., Mr E. R. Mosman; Kyushu Military Government Team.  
Lt Col Karl L. Springer, C. O., Maj V. Y. Jones, Economics Officer, Fukuoka Military Government Team.  
Maj E. A. Hutchinson, C. O., Capt Royce L. Eaves, Economics Officer, Sgt C. R. Vickery, NR, Miyazaki Military Government Team.  
Capt Burton, Economics Officer, Shikoku Military Government Region.  
Lt Col W. B. Searles, C. O., Mr D. W. Mann, Economics Officer, Ehime Military Government Team.  
Lt Col O. A. Axelson, C. O., Capt David E. Lamb, Jr., Economics Officer, Kochi Military Government Team.  
Major M. B. Burns, Economics Officer, Tokai-Hokuriku Military Government Region.  
Lt Col C. H. Dunning, C. O., Mr C. H. George, Economics Officer, Lt R. M. Baranouskas, Economics Officer, Aichi Military Government Team.  
Capt Carl C. Cullison, Economics Officer, Shizuoka Military Government Team.

Japanese Personnel:

Fukuoka:

Mr S. Shinohara, Chief, Agricultural Administration Section, Prefectural Office  
Mr T. Ishii, Chief, Agricultural Extension Section, Prefectural Office.  
Mr S. Katsuki, Agricultural Extension Section, Prefectural Office.  
Mr T. Urose, Agricultural Extension Section, Prefectural Office.  
Mr T. Mizuuchi, Director, Prefectural Agriculture Experiment Station.  
Mr H. Fukano, Entomologist, Prefectural Agriculture Experiment Station.  
Mr T. Mishima, Chief, Economy Department, Prefectural Office.

*Encl 1.*



Japanese Personnel (Cont'd)Miyazaki:

Mr H. Oda, Chief, Agricultural Administration Section, Prefectural Office.  
 Mr T. Hino, Vice Chief, Agricultural Administration Section, Prefectural Office.  
 Mr M. Hidaka, Agricultural Administration Section, Prefectural Office.  
 Mr T. Onishi, Entomologist, Agricultural Administration Section, Prefectural Office.  
 Mr T. Hidaka, Material Section, Prefectural Office.  
 Mr S. Cho, Director, Prefectural Agricultural Experiment Station.  
 Mr T. Samejima, Entomologist, Prefectural Agricultural Experiment Station.  
 Mr T. Mizogami, Pathologist, Prefectural Agricultural Experiment Station.  
 Mr T. Kondo, Entomologist.

Shime:

Mr T. Suda, Chief, Agricultural Administration Section, Prefectural Office.  
 Mr H. Mitsuhashi, Director, Prefectural Agricultural Experiment Station; Chief, Agricultural Extension Section, Prefectural Office.  
 Mr M. Morikawa, Agricultural Extension Section, Prefectural Office.  
 Mr T. Migi, Agricultural Experiment Station.  
 Mr T. Sawada, Entomologist, Agricultural Improvement Station, M.F.  
 Mr Y. Miyauchi, Vice Governor, Prefectural Office.  
 Mr M. Taniyanagi, Chief of Economy Department, Prefectural Office.  
 Mr H. Kawagoe, Village Master of Hagata-mura.

Kochi:

Mr S. Hosoki, Chief, Economy Department, Prefectural Office.  
 Mr T. Yamawaki, Agricultural Extension Section, Prefectural Office.  
 Mr K. Yamamoto, Agricultural Extension Section, Prefectural Office.  
 Mr Y. Miyawaki, Prefectural Agricultural Experiment Station.  
 Mr Y. Sugihara, Entomologist, Agricultural Extension Section, Prefectural Office.  
 Mr T. Nozaki, Village Master of Umanoue-mura.

Aichi:

Mr S. Suzuki, Chief, Agriculture & Forestry Department, Prefectural Office.  
 Mr N. Miyazaki, Chief, Agricultural Administration Section, Prefectural Office.  
 Mr Y. Ota, Agricultural Administration Section, Prefectural Office.  
 Mr S. Ozaki, Entomologist, Prefectural Agricultural Experiment Station.  
 Mr S. Kariya, Entomologist, Prefectural Agricultural Experiment Station.  
 Mr D. Shiraiishi, Director, Agricultural Experiment Station.

*Incl 1 to incl*



Japanese Personnel (Cont'd)

**Shizuoka:**

- Mr Y. Aoshima, Agricultural Administration Section, Prefectural Office.
- Mr K. Ishikawa, Agricultural Administration Section, Prefectural Office.
- Mr K. Iyatomi, Entomologist, Prefectural Agricultural Experiment Station.
- Mr K. Morimoto, Chief, Material Section, Agricultural Cooperative.
- Mr K. Ikeda, Agricultural Cooperative.
- Mr N. Otani, Village Master of Nishiura-mura.



Plan For Treatment and Program For  
Field Experiment on Rice Borer.

1. General Statistics, All Areas.

- a. Exact (measured) acreage of all paddy rice 1949.
- b. Exact (measured) acreage of " " " 1948 if possible.
- c. Measured yield of rice 1949.
- d. Measured yield (if possible) of rice 1948.
- e. All additional data available on areas for past 10 years.
- f. Acreage and yield by year.

Any changes in types of rice grown and when changes were made. Varieties by acreage for 1949. Use (and number) of light traps, when installed, by number. History of use and handling of straw. Amounts and types of fertilizers by years. Fertilizer used 1949. This should be the same or as nearly so as possible for all experimental areas.

- g. Complete map of experimental area, showing buildings, tree areas, fields by crop, and position of light traps in check fields.
- h. The normal activities are not to be affected.

Straw will be handled normally. If normally stacked in barns this practice will be followed with exceptions indicated later, however stacking outside is preferable.

- i. The amount of straw normally fed to livestock will be fed, and normal quantity will be composted.
- j. Any straw normally used for commercial manufacture.

(Straw bags, mats, or other straw goods) will be used. (This does not mean, however, that an attempt should be made to dispose of as much straw as possible in order to reduce the infestation. Such a plan would defeat the purpose of the experiment and make use of the area undesirable.)

- k. Any loss, incurred by the farmers, as a result of this experiment up to 20 percent will be paid by the Government, however this is a protective measure and is not meant in any way to indicate that all normal farm practices, not specifically covered in the plan of the experiment, should not be carried out as completely and efficiently as usual.

2. Light Traps Check.

- a. One series of areas will be studied, using the fluorescent light trap as recommended, as a check, and to gain additional information on the light traps themselves.

*Incl 2 to Incl 1*



b. There should be no appreciable rice area not visible to a light trap.

c. Light traps should not be more than 280 yards (250 meters) a part, or 140 yards (135 meters) from the edge of the area (hillside, water, etc.). This should serve as a relative standard spacing.

d. Care of Light Traps.

Care should be to obtain maximum efficiency. Trap-light should be in operation from sundown to 11 P.M. All lights should be turned off at 11 P.M. Oiled water in basin should be changed once each week, and adequate oil should be added to the basin each night. Bulbs should be kept clean and lights in operation every night, at least when adults are in flight. Nightly catch removed from traps and number of stem borer moths counted, and recorded. In paddy borer areas, record species separately, if possible.

e. Stocking

All straw should be stacked in the open, if possible. If in sheds or barns it should be indicated. If in stacks the standard stack should be used (one rice straw length in radius)

f. Population Survey, In storage.

April 1, or as soon thereafter as possible, an experiment station, or Prefectural technician will visit each area and make complete survey of the straw remaining in the area. Total number of stacks will be recorded, and measured. Measurements will include circumference of stack at center and from base on one side, over the top to base on opposite side.

A sample of 400 stems will be taken from each stack group and live larvae or pupae counted per 400 stem sample. (If one farmer has six stacks remaining, of 1948 crop straw, all in one group, a 400 straw sample taken on the outer edge of the stacks N,S,E and W should be adequate.). The 400 stems should be taken 100 per place, about the center of the stack on N,S,E and W sides of the stack. This survey will indicate the potential moth population for the area.

If straw is stacked inside the sampling should be done at time, or before placing the straw in the building in which case all that need be done at time of sampling in the spring is to measure amount of straw remaining. However it might be desirable



to make a measurement of amount of straw at time of storage, and a larval survey again at time of spring measurement.

g. Population Survey, In Field.

Experiment Station Technician should visit the field at least twice each month during the growing season and make adequate infestation counts.

- (1) Around light traps, within 5 feet radius, and at 10-20-40 feet from trap. Along edges of fields. Random field or area (spot check).
- (2) Check also weight of infestation in relation to proximity to stacks.

h. Monthly reports of progress, including any problems or misoperations to be presented to the Ministry of Agriculture and Forestry and in duplicate to NRS.

i. Final Reports will include borer population in straw at harvest time by random 100 straw samples, as well as yield as indicated under "General Statistics." Sufficient samples should be taken to give an accurate estimate of average infestation.

j. Nursery Treatment.

Since Light Traps are not operated until rice is transplanted into the field, moth collection in the nursery, or egg collection may be practiced. If it is done, record of moths taken and egg masses destroyed, should be recorded. There is no objection to the use of Light Traps, if in satisfactory position, for nursery treatment, however if this is done it should be reported and records kept as in field experiment. Any nursery rice discarded for planting due to infestation should be reported. No chemical treatment to be used.

h. Supplementary Treatment.

No other treatment is to be made. No supplemental egg collection, stem roguing, etc., is to be practiced.

3. Insecticide Treatment:

- a. Control will include stack, or stored straw, treatment with B.H. C. as prescribed later.
- b. Destruction of all hibernating larvae in stubble either by flooding fields in winter, or by thorough cultivation to assure that all straw is turned under at least 3 inches, preferably stem-end down.



c. It is imperative that we have complete control of all rice straw in the community. Any straw or residue likely to serve as wintering quarters for larvae should either be treated or destroyed. Experiment Station or designated personnel should make the insecticide applications.

- (1) If possible straw should be stacked, as prescribed, in the field.
- (2) If storage is in buildings it would be preferable if the building is separate from the living quarters. Since the insecticide to be used has a somewhat disagreeable odor. Since there is some migration of borers from straw to walls, floors, etc., of buildings, the building should be treated before storage, and it would be preferable if straw is not piled against the walls.

d. No light traps of any kind are to be used.

e. No untreated straw or straw goods likely to carry an appreciable infestation of borers to be brought into the treatment area.

f. Survey of Treatment Areas.

Straw left in the field as of April 1, or date prescribed for first treatment, should be the same as outlined above, ie; population survey and stack measurement for each stack or group of stacks.

g. No other treatment, including no picking of eggs or collection during nursery period.

h. Checks.

- (1) Biweekly check of areas, as prescribed for Light Trap areas, to determine average populations, and to see that experimental instructions are carried out.
- (2) Final fall reports. Average percent of "white heads," or stem infestation, accurate yields.

4. Addenda:

A careful check should be made on unusual outbreaks of other insects, but no treatment for other insects should be made without consulting Mr. Roberts, if it may, in any way, affect the results of the experiment.



## 5. Supplemental Studies:

a. In order to make data more complete on the stem borers the following surveys are requested.

### (1) Other possible hibernation locations:

(a) Hibernation in weeds or other crops (millet stubble or fodder, etc.) in the field areas. Number of larvae found in such hibernation, by species, per unit of stems examined.

(b) Hibernation in stubble.  
Percent of stubble found to contain larvae.  
Above ground level.)  
    ) Height at which straw was  
    ) cut above ground.  
Below ground level.

(c) Hibernation other than in fields.  
Hillside hibernation, if any.  
Plants used for hibernation.  
Distance of actual migration of larvae for such hibernation.

### b. Other host plants.

Hibernation should be distinctly separated from host plants. That is, if the plant indicates actual feeding by the insect, followed by hibernation, the plant is a normal host plant, with hibernation only following as a normal procedure. Such cases should be recorded under host plants, with percent infestation recorded. This should be studied on both weeds and cultivated plants, and to determine the distance from paddy fields at which such hosts are infested. For instance, if a heavy graminous grass appears to be a host, growing over a complete hillside, a spot survey should be made every 10 meters up the hill, reporting insect populations at each level.



KYUSHU MILITARY GOVERNMENT REGION  
HEADQUARTERS AND HEADQUARTERS DETACHMENT  
Fukuoka, Kyushu, Japan

RWO/tn

AP0 929  
25 January 1949

729.5

SUBJECT: Surveillance of Forestry and Bark Beetle Control

TO : Commanding Officer, Fukuoka Mil Govt Team, APO 929  
Commanding Officer, Saga Mil Govt Team, APO 929  
Commanding Officer, Nagasaki Mil Govt Team, APO 929  
Commanding Officer, Kumamoto Mil Govt Team, APO 24-1  
Commanding Officer, Miyazaki Mil Govt Team, APO 24-2  
Commanding Officer, Oita Mil Govt Team, APO 24-2  
Commanding Officer, Kagoshima Mil Govt Team, APO 970

FILE

1. The near completion of the land reform program and the accomplishment of the most important phase of the agricultural cooperative program, should leave Natural Resources officers free to devote more time to the vital problems of forestry. It is desired that Natural Resources sections make a careful study of bark beetle control and maintain charts showing rate of infection and rate of decontamination of forest lands. Surveillance of bark beetle control should include careful inquiry into the effectiveness of "decontamination" in areas reported freed of bark beetles, and also effort to assure more cooperation in the control program on the part of owners of private forest lands.

2. Surveillance of forestry problems should include a careful study of reforestation, and erosion, and inquiry into control of cutting of forests, so that immature trees are not cut unless this is required for bark beetle control and that clear-cutting is not carried out where danger of erosion will result.

BY ORDER OF COLONEL HILTON:

CHARLES L. BACHTEL  
1st Lt SIG C  
Adjutant



KYUSHU MILITARY GOVERNMENT REGION  
 HEADQUARTERS AND HEADQUARTERS DETACHMENT  
 Fukuoka, Kyushu, Japan

RWO/tn

APC 929  
 17 January 1949

729.5

**SUBJECT:** Pine Bark Beetle Control

**THRU :** Commanding General, I Corps, APO 301  
 Attn: Mil Govt Section

**TO :** Supreme Commander of the Allied Powers, APO 500  
 Attn: Natural Resources Section

1. On 21 December 1948 a conference was held at Beppu City, Oita Prefecture to discuss progress made against Pine Bark Beetles in Kyushu, methods employed and future plans to improve the control campaign. Attending were representatives of the forestry section, Central Government, each prefecture in Kyushu, Kumamoto Regional Land Office and Natural Resources officers of Kyushu Military Government Region and Oita Military Government Team.

2. It was disclosed that the most serious bottlenecks to an increased rate of extermination are principally in private forest lands and are as follows:

a. Lack of cooperation of private forest owners.

Each Ken Government carries out the campaign of extermination in private forests, but at present there is no legal authority to force private forest owners to comply with instructions and suggestions. Many are reluctant to cooperate even though 50% of the expense is subsidized by the government.

b. The small percent of budget allowed for field trips by Ken officials:

Only 2.5% of the budget is permitted to be used for field trips by officials. In order to supervise and encourage the program it is essential that the private forest owners, village, and town officials be frequently contacted and advised. The present limitation of funds permits few extensive field trips.

c. Danger of forest fires caused by burning bark.



Ltr, Kyushu Mil Govt Region, APO 929, subj: "Pine Bark Beetle Control", dtd 17 Jan 49, cont'd.

Infected trees are often located in dense wooded areas and removal to safe areas for burning is time consuming, if not entirely impossible.

3. Many delegates present felt that, in order to be effective, private owners should be required to exterminate bark beetles on their own lands or suffer definite penalties. Doubt was expressed on a proposal to permit owners to refer their infected trees to the mayors for action with proceeds obtained from the trees cut to be retained by the government as reimbursement. It is believed too many owners would find it profitable to follow this plan, and the mayor would be unable to cope with the amount of labor required.

4. Report of progress made in extermination of bark beetles in Kyushu is attached as inclosure 1.

5. Inclosure 2 is detailed report of proceedings of conference. Special attention is invited to Section 4, page 6, giving list of suggestions by delegates to improve the program.

FOR THE COMMANDING OFFICER:

2 Incls:  
As stated

CHARLES L. BACHTEL  
1st Lt SIG C  
Adjutant

*Incl 2  
previously Filed*



**A. Beetle Infestation**Prior to 1948 in Kyushu

	<u>Trees</u>	<u>Area Cho</u>	<u>Koku</u>
Natural Forests	917,990	38,955.92	1,218,336
Private Forests	<u>7,597,506</u>	<u>179,505</u>	<u>5,309,297</u>
<b>Total A</b>	<b>8,515,496</b>	<b>218,460.92</b>	<b>6,527,633</b>

**B. Beetle Infestation**During 1948 in Kyushu

	<u>Trees</u>	<u>Area (cho)</u>	<u>Koku</u>
Natural Forests	201,625	9,480.72	301,616
Private Forests	<u>1,335,163</u>	<u>61,348</u>	<u>1,918,140</u>
<b>Total B</b>	<b>3,536,788</b>	<b>70,828.72</b>	<b>2,219,756</b>

**C. Beetle Extermination**Prior to and During 1948 in Kyushu

	<u>Trees</u>	<u>Area (cho)</u>	<u>Koku</u>
Natural Forests	490,589	11,268.61	386,771
Private Forests	<u>6,597,538</u>	<u>168,784</u>	<u>4,766,540</u>
<b>Total C</b>	<b>7,088,127</b>	<b>180,052.61</b>	<b>5,153,311</b>

**D. Remaining to be Exterminated. Total A and B - C**

	<u>Trees</u>	<u>Area (cho)</u>	<u>Koku</u>
Natural Forests	629,026	37,168.03	1,133,181
Private Forests	<u>4,335,131</u>	<u>72,069</u>	<u>2,460,897</u>
<b>Total</b>	<b>4,964,157</b>	<b>109,237.03</b>	<b>3,594,078</b>

Incl 2



**A. Beetle Infestation**

Prior to 1948 in Kyushu

	<u>Trees</u>	<u>Area Cho</u>	<u>Koku</u>
Natural Forests	917,990	38,955.92	1,218,336
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	<u>Trees</u>	<u>Area (cho)</u>	<u>Koku</u>
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*Inclaves # 15*