CONVERSION TABLES FOR LARVICIDE APPLICATIONS

CARROLL N. SMITH

Entomology Research Branch, Agr. Res. Serv., U.S.D.A.

Mosquito-control workers frequently have occasion to convert larvicide applications from pounds of toxicant applied per acre to parts of toxicant per million parts of water, or vice versa. Several years ago the personnel of the Corvallis, Oregon, laboratory felt the need for reference tables whereby these conversions could be quickly made. W. W. Yates, now retired, prepared the original tables which were used successfully at Corvallis and elsewhere. The tables have now been modified slightly, and it is believed mosquito-control workers will find the tables useful in much of their everyday work. They have been found particularly useful in connection with experiments on the control of mosquito larvae in irrigated areas. Frequent reference is also made to the following unit equivalents:

1 acre=43,560 square feet

1 cubic foot=7.48 gallons

1 acre-foot=43,560 cubic feet=325,829 gallons

I gallon of water=8.337 pounds

1 pound=453.59 grams

Pounds per acre equivalent to parts per million (wt/wt) in water at different depths

Parts per Million	Pounds per acre in Water at Indicated Depth				
	1 Inch	4 Inches	1 Foot		
1.0	0.226	0.904	2.716		
.9	.203	.814	2.444		
. 8	.181	.723	2.173		
.7	.158	.633	1.901		
.6	.136	.542	1.630		
.5	.113	. 452	1.358		
• 4	.090	362	1.086		
- 3	.068	.271	.815		
. 2	.045	.181	.543		
. I	.023	.090	.272		

Equivalent dosages of insecticides applied to flooded areas on the basis of pounds per acre

Pounds per Acre	Grams per Acre	Grams per 100 Square Feet	Parts per Million (wt./wt.) in Water		Million Parts of Water per Part
			12 Inches Deep	1 Inch Deep	of Insecticide at 12 Inch Depth
0.005 .010 .015 .025 .050 .075 .10 .15 .20 .25 .50	2.27 4.54 6.80 11.34 22.68 34.02 45.36 68.04 90.72 113.4 226.8 340.2 453.6	0.0052 .0104 .0156 .026 .052 .078 .104 .156 .208 .26	0.00184 .00368 .00552 .00920 .0184 .0276 .0368 .0552 .0736 .0920 .184 .276	0.02208 .04416 .0662 .110 .221 .331 .442 .662 .883 1.10 2.21 3.31 4.42	543.5 271.7 181.1 108.7 54.3 36.2 27.2 18.1 13.6 10.9 5.43 3.62 2.72
I.25 I.5	567.0 680.4	1.30 1.56	.460 .552	5.52 6.62	1.81
2.0 2.5 3.0	907.2 1,134.0 1,360.8	2.08 2.60 3.12	.736 .920 1.104	8.83 11.04 13.25	1.36 1.09 .906