

Small Volume Mixing of Fungicides

Manufacturers directions for mixing fungicides are usually given in terms of pounds and ounces or quarts and pints per 100 gallons. The home gardener seldom has need for such volumes of spray. A convenient method for determining smaller amounts of fungicide is simply to break pounds and quarts into ounces and grams or milliliters, then convert these back to units such as a teaspoon, a measuring device commonly available to the home gardener.

When measured by teaspoon, the material should be lightly compacted and then leveled off (to the rim of the spoon). The table was

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prepared for this purpose and provides the information for the fungicides commonly used in Iowa:

Trade name, active ingredient, weight in grams per teaspoon (compacted), rates per 100 gallons and rate in teaspoons per gallon.

CAUTION: these figures are presented merely as a guide—some variation can be expected between trade names of the same formulation and even between successive batches of the same formulation from the same manufacturer.

To simplify information, trade names of products have been used in this publication. No endorsement is intended nor is criticism implied of similar products not named.

Mixing Small Volumes of Fungicides

Product	Active ingredient	Use rate		
		Grams or cc/teaspoon ^a	100 gallons	teaspoons/gallon ^b
Agri-strep	streptomycin sulfate 21.5%	2.1 gr	½ lb (100 ppm)	1
Basic copper sulfate	tribasic copper sulfate, 53% copper	5.0 gr	4½ lb	4
Benlate	benomyl 50%	1.8 gr	½ lb	1¼
Bordeaux mixture	copper, metallic 8%	3.8 gr	4-8 lb	4-8
Bravo	chlorothalonil 75%	2.4 gr	1½ lb	2¾
Captan	captan 50% wp	3 gr	2 lb	3
Carbamate	ferbam 76%	1.9 gr	1½ lb	3½
Cit Cop 4-E	copper resin	5.0 cc	2 qts	3½-4
C-O-C-S	copper, metallic 50%	5.0 gr	3 lb	2½
Copper sulfate	copper sulfate pentahydrate 100%	5.0 gr	4 lb	3½
Cyprex	dodine 65%	2.5 gr	6 oz	½
Daconil 2787	chlorothalonil 75%	2.4 gr	1½ lb	2¾
Dexon	diazoben 35%	1.5 gr	4 oz	¾
Difolatan	captafol 80%	2.6 gr	1 lb	1¾
Dithane M-22	maneb 80%	3.1 gr	1½ lb	2¼
Dithane M-45	mancozeb 80%	3.5 gr	1½ lb	2
Dithane Z-78	zineb 75%	3.1 gr	1½ lb	2¼
Dyrene	anilazine 50%	2.6 gr	1 lb	1½
Fermate	ferbam 76%	1.6 gr	2 lb	5
Flotox	sulfur 90%	4.1 gr	4 lb	4½
Fore	mancozeb 80%	2.8 gr	1½ lb	2½

^aWeight may vary depending on amount of compacting.

^bApproximation to nearest ¼ teaspoon.

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Product	Active ingredient	Grams or cc/teaspoon ^a	Use rate	
			100 gallons	teaspoons/gallon ^b
Karathane WD	dinocap 25%	2.8 gr	½ lb	¾
Kocide 101	cupric hydroxide 86%, 56% copper	2.0 gr	3 lb	7
Kolospray	sulfur 81.25%	4.4 gr	6 lb	6¼
Manzate D	maneb 80%	2.8 gr	1½ lb	2½
Manzate 200	mancozeb 80%	2.5 gr	1½ lb	2¾
Mertect 160	thiabendazole 60%	1.5 gr	1½ lb	4½
Niagara Zineb-75	zineb 75%	2.2 gr	1½ lb	3
Orthocide	captan 50%	3.0 gr	2 lb	3
Phaltan	folpet 75%	2.6 gr	1½ lb	2½
Phygon	dichlone 50%	3.0 gr	½ lb	¾
Plantvax	oxycarboxin 75%	1.4 gr	1 lb	3¼
Polyram	metiram 80%	2.3 gr	1½ lb	3
Terraclor	PCNB 75%	2.9 gr	1 lb	1½
Terrazole	ethazol 35%	2.7 gr	5 oz	½
Thylate	thiram 65%	3.1 gr	1½ lb	2¼
Topsin M	thiophanate-methyl 70%	1.7 gr	10 oz	1¾
Truban	ethazol 30%	2.6 gr	5 oz	½
Zerlate	ziram 76%	1.9 gr	1½ lb	3½

^a Weight may vary depending on amount of compacting.^b Approximation to nearest ¼ teaspoon.

Some useful units of weight and volume

1 fluid ounce = 29.6 ml

1 teaspoon = 5 ml, 0.17 fl oz

1 tablespoon = 3 tsp, 15 ml, ½ fl oz

1 cup = 16 tbsp, 8 fl oz, 236.6 ml

1 quart = 2 pt, 32 fl oz, 946 ml (.946 liter)

1 gallon (U.S.) = 4 qt, 8 pt, 16 c, 128 fl oz,
3785.3 ml, 3.78 liters

1 liter = 1.06 qt, 2.11 pt

1 ounce (avdp.) = 28.35 g

1 pound = 16 oz, 454 g

1 kilogram = 1,000 g, 2.20 lb

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