

AGRICULTURAL EXPERIMENT STATION
Oregon State College
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Corvallis

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MAXIMUM AMOUNT OF FERTILIZERS RECOMMENDED FOR USE IN FOLLOWING
FOOD PRODUCTION ORDER 5 (FPO 5)

"Food Production Order No. 5, Chemical Fertilizers," issued by the Secretary of Agriculture on January 18, 1943, designates crops deemed essential to the war effort as "Group A" crops and all others as "Group B" except those on which fertilizers containing chemical nitrogen is prohibited by the Order. The Order states that in the case of both A and B crops "the rate of application per acre shall not exceed the rate of application per acre recommended by the State Agricultural Experiment Station."

The problem of determining the need, the kind, and the amount of fertilizer to use in economical crop production is a complicated one. It not only involves many different crops but also a proportionately greater number of soils and environmental conditions, including weather. The recommendations in the following tables indicate the maximum amount of plant nutrients to be used on each of the specific crops. These data have been gathered from Experiment Station and Extension work in Farm Crops, Horticulture, Vegetable Gardening, and Soils, together with successful practices used by growers in the different sections of the state.

The most profitable type and amount of fertilizer to use will vary not only with the kind of crops but also with the kind of soil, the supply of water, farm manures, the use of green manure crops, and the particular section of the state. The use of farm manures and green manure crops will reduce materially the need for chemical nitrogen and potassium.

TABLE I. MAXIMUM AMOUNT OF FERTILIZERS PER ACRE RECOMMENDED
FOR USE IN FOLLOWING FOOD PRODUCTION ORDER 5 (FPO 5)

GROUP A CROPS

	Nitrogen lbs. (Per Acre)	Phos. (P ₂ O ₅) lbs. (Per Acre)	Potash (K ₂ O) lbs. (Per Acre)
1 Flax	20	0	0
2 Hybrid Corn for Seed	32	48	16
3 Beans, Dry	0	45	0
4 Beans, Snap	80	160	30
5 Beans, Lima	24	72	24
6 Beets	50	75	100
7 Cabbage	50	100	100
8 Carrots	50	75	100
9 Kale	50	100	100
10 Onions	60	200	200
11 Peas (processed)	16	48	16
Peas	40	100	50
12 Peppers	50	75	100
13 Potatoes, Irish (irrigated)	64	80	100 ^{1/}
Potatoes, Irish (non-irrigated)	32	50	50
14 Spinach	90	40	60
15 Sweet Corn	32	96	32
16 Tomatoes	32	96	32
17 Vegetable Seed	100	100	100
18 Prunes (dry) ^{2/}	50	60	0

^{1/} Reduce potash one-half except on peat and muck soils.

^{2/} On cover crop only.

The rates per acre of these ratios may be obtained or closely approached by using the proper rate per acre of the grades of fertilizer approved for use in Oregon, the use of simples, or combinations of the two. The ratio 24-72-24 is equivalent to 600 lbs. of 4-12-4, and the ratio 32-48-16 is equivalent to 400 lbs. of 4-12-4 plus 100 lbs. of a nitrogen carrier analyzing 16 percent nitrogen.

TABLE II. MAXIMUM AMOUNT OF FERTILIZERS PER ACRE RECOMMENDED
FOR USE IN FOLLOWING FOOD PRODUCTION ORDER 5 (FPO 5)

GROUP B CROPS

	Nitrogen lbs. (Per Acre)	Phos. (P ₂ O ₅) lbs. (Per Acre)	Potash (K ₂ O) lbs. (Per Acre)
1 Asparagus	90	40	60
2 Cauliflower	50	75	100
3 Broccoli	50	75	100
4 Brussel Sprouts	50	75	100
5 Celery	60	200	200
6 Cucumber (process)	75	150	150
7 Dill	32	40	
8 Egg Plant	80	160	80
9 Parsnips	50	100	100
10 Radish	24	50	50
11 Rutabaga	50	100	100
12 Squash & Pumpkin	16	48	50
13 Turnips	50	100	100
14 Irrigated:			
Apples } Old	160	60	20
Cherries } Trees			
Pears } Young			
Peaches } Trees	80	60	20
Prunes }			
15 Nonirrigated			
Orchard*	50	60	0
16 Cane Fruits	30	100	100
17 Strawberries	30	100	100
18 Peppermint	32	50	50
19 Bulbs	30	100	100
20 Corn Field	32	48	16
21 Grass Seed	40	0	0
22 Pasture	32	90	0
23 Sugar Beets	30	90	0
24 Sugar Beet Seed	100	90	50
25 Hops (irrigated)	64	80	80
Hops (nonirrigated)	32	40	40

* On cover crop.

The grades of fertilizers approved for Oregon are as follows:

0-12-20	4-24-4
3-10-10	5-6-3
3-10-20	6-30-0
4-12-4	9-4-6
4-24-0	17-4-4
17-12-0	
Nitrate of soda	16-0-0
Nitrate of soda-potash	14-0-14
Sulphate of ammonia	20 (or higher)-0-0
Cyanamid	20 (or higher)-0-0
Uramon	42-0-0
Ammonium phosphate	11-48-0 or 16-20-0
Superphosphate	0-18 (or higher)-0
Muriate of potash	0-0-50 (or higher)
Sulphate of potash	0-0-48 (or higher)
Manure salts	0-0-22 (or higher)
Sulphate of potash-magnesia	0-0-18 (or higher)
Basic slag	Any grade
Ground phosphate rock	Any grade
Colloidal phosphate	Any grade
Cotton hull ash	Any grade
Wood ash	Any grade
Victory garden fertilizer	3-8-7

Victory garden fertilizer must be of Grade 3-8-7 and may be put up in five, ten, twenty-five, or one hundred-pound packages. A victory garden is one planted primarily for the non-commercial production of vegetables and small fruits.

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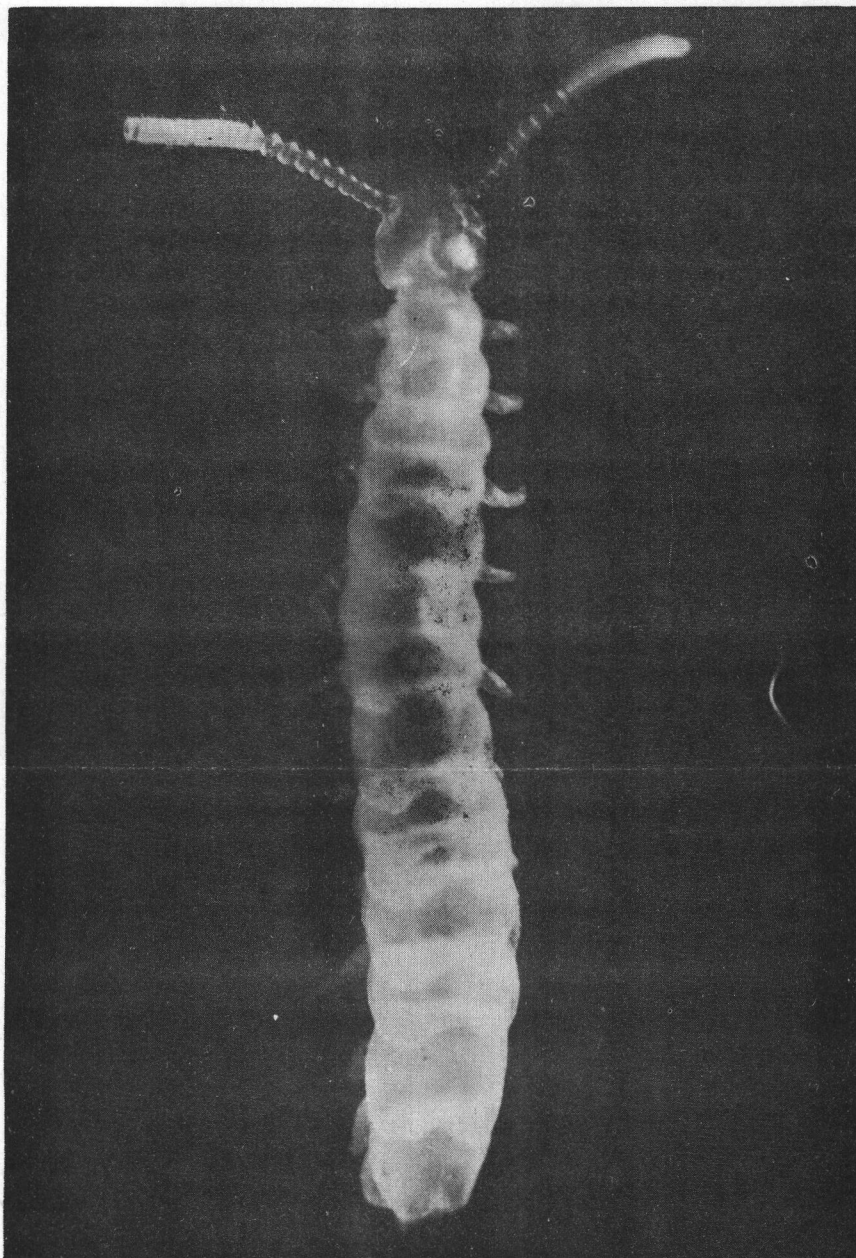


Fig. 1

The Symphylid, *Scutigella immaculata* Newport
greatly enlarged