

3



COMMERCIAL FERTILIZERS FOR MINNESOTA 1944-45

Rates recommended by the Minnesota Agricultural Experiment Station as required by War Food Order No. 5.

C. O. Rost and Paul M. Burson

SEP 17 1945

1. What fertilizer grades will be available in Minnesota in 1944-45?

War Food Order No. 5, revised, limits the fertilizer grades listed below as the only *mixed* fertilizers which may be offered for sale for use in Minnesota from July 1, 1944, to June 30, 1945.

0-14-7	0-9-27	2-12-6	4-16-16
0-12-12	0-12-36	2-16-8	4-24-12
0-20-10	0-10-20	3-9-18	6-12-18
0-20-20	0-12-24	3-18-9	8-16-12
0-30-15		3-12-12	8-8-8
		4-12-8	10-6-4

2. What do these grade figures mean?

In a fertilizer formula the first figure stands for the percentage of nitrogen, the second for the percentage of available phosphate (P_2O_5), and the third for the percentage of water-soluble potash (K_2O). For example, 3-9-18 means a fertilizer containing 3 per cent of nitrogen, 9 per cent of available phosphate, and 18 per cent of water-soluble potash. This is a fertilizer grade.

This archival publication may not reflect current scientific knowledge or recommendations.
Current information available from University of Minnesota Extension: <http://www.extension.umn.edu>

3. Will straight fertilizers and fertilizer materials be available in Minnesota?

Yes. A list of straight fertilizers and fertilizer materials with the formula of each is given below:

Grades Applicable to All States	
Nitrate of soda	16-0-0
Nitrate of potash	14-0-14
Cyanamid	20-0-0 (or higher)
Uramon	42-0-0
Ammoniated superphosphate	4-16-0 (or higher)
Ammonium phosphate	{ 11-48-0 16-20-0
Uramon-limestone	20-0-0 (or higher)
Ammonium nitrate-limestone	20-0-0 (or higher)
Ammonium nitrate	30-0-0 (or higher)
Potassium nitrate	14-0-44 (or higher)
Superphosphate	0-18-0 (or higher)
Muriate of potash	0-0-50 (or higher)
Sulfate of potash	0-0-48 (or higher)
Manure salts	0-0-22 (or higher)
Sulfate of potash magnesia	0-0-18 (or higher)
Potash lime	0-0-6
Ground phosphate rock	Any grade
Colloidal phosphate	Any grade
Cotton hull ash	Any grade
Wood ash	Any grade

4. What fertilizer may be used on Victory Gardens?

A special Victory Garden fertilizer will be on the market. This fertilizer will contain 4 per cent of nitrogen, 12 per cent of available phosphate, and 4 per cent of water-soluble potash. The bags must be marked "Victory Garden Fertilizer for Food Production Only." WF Order No. 5 sets no maximum rate of application. It is suggested that this be 1,000 lbs. per acre for Minnesota gardens or about 2½ lbs. for every 100 sq. ft. (10 ft. x 10 ft.). Barnyard manure is an excellent garden fertilizer and is recommended where it is available.

5. What rates of application are recommended for different crops?

According to WF Order No. 5 the rates per acre of chemical fertilizers for different crops are those recommended by the State Agricultural Experiment Station or the rate customarily used in the area in which the crop is to be grown, whichever is greater. The rates given in this schedule are those recommended by the Minnesota Agricultural Experiment Station.

Wartime Fertilizer Schedule for Minnesota—Effective to June 30, 1945

For recommendations for peat soils see Item 18

6. MARKET GARDEN CROPS*

(Hill or row application. Increase rate 1½ times if fertilizer is broadcast)

Fertilizers with nitrogen		Fertilizers without nitrogen	
Grade	Pounds per acre	Grade	Pounds per acre
3-12-12	350	0-14-7	450
3-18-9	350	0-12-12	450
3-9-18	350	0-20-10	300
4-24-12	250	0-20-20	300
4-12-8	400	0-30-15	250
4-16-16	250	0-20-0	300
6-12-18	250	0-43-0	150
8-16-12	200		

7. CANNING CROPS*

2-16-8	300	0-14-7	275
3-12-12	250	0-12-12	275
3-18-9	250	0-20-10	200
4-24-12	200	0-20-20	200
4-12-8	350	0-30-15	200
4-16-12	250	0-20-0	200
6-12-18	250	0-43-0	100
8-16-12	200		

8. POTATOES*

3-9-18	350	0-12-12	350
3-12-12	350	0-20-20	250
4-12-8	350	0-20-10	250
4-24-12	300	0-20-0	250
8-16-12	200	0-43-0	125
4-16-16	300	0-30-15	250
6-12-18	300		

* Rates for market garden crops, canning crops, and potatoes may be increased 50 per cent when the crop is grown under irrigation.

9. CORN

(Fertilizer in hill or along row)

Grade	Pounds per acre	Grade	Pounds per acre
2-12-6	100	0-20-20	100
2-16-8	100	0-20-10	100
3-18-9	100	0-12-12	150
3-12-12	100	0-43-0	75
4-12-8	100	0-20-0	100
4-24-12	100	0-16-8	125

10. SMALL GRAINS†

(Fertilizer broadcast)

2-12-6	200	0-12-12	275
2-16-8	200	0-20-10	200
		0-16-8	250
		0-20-20	200
		0-43-0	100
		0-20-0	200

11. SUGAR BEETS

(Fertilizer drilled beside row)

2-16-8	150	0-12-12	275
3-12-12	150	0-20-20	200
4-12-8	150	0-20-10	200
4-24-12	100	0-43-0	100
4-16-16	125	0-20-0	200

12. LEGUME HAYS

(Fertilizer broadcast)

0-43-0	125	0-12-12	350
0-20-0	250	0-20-20	250
0-20-10	250	0-14-7	350
0-16-8	300		

† The rate of fertilizers containing no nitrogen may be increased by one third when a legume is sown with the grain.

13. PASTURES AND MEADOWS

(Fertilizer broadcast)

Fertilizer	Pounds per acre	Grade	Pounds per acre
Sulfate of Ammonia‡	200	0-12-12	350
Nitrate of Soda	250	0-20-20	300
Cyanamid	200	0-20-10	300
Ammonium Nitrate	125	0-14-7	350
		0-20-0	300
		0-43-0	150

14. SMALL FRUITS

(Fertilizer broadcast)

Fertilizers with nitrogen		Fertilizers without nitrogen	
3-18-9	400	0-20-10	500
4-12-8	500	0-20-20	500
4-12-4	500	0-20-0	500
Ammonium Sulfate‡	200	0-43-0	250
Ammonium Nitrate§			

15. TREE FRUITS

(Fertilizer broadcast)

Apples

Ammonium Sulfate‡	{ Orchards 2 to 6 years of age, 2 pounds per tree Orchards 7 to 15 years of age, 5 pounds per tree Orchards 16 years or over, 10 pounds per tree
Cyanamid	
Nitrate of Soda	
Ammonium Nitrate§	

Stone Fruits

Ammonium Sulfate‡	{ Orchards 2 to 6 years of age, 1½ pounds per tree Orchards 7 years and over, 4 pounds per tree
Cyanamid	
Nitrate of Soda	
Ammonium Nitrate§	
4-12-8	500 pounds per acre broadcast
3-18-9	500 pounds per acre broadcast

‡ Not available for 1944-45.

§ At a rate to give an amount of nitrogen equivalent to ammonium sulfate.

16. BROADCAST TOP DRESSINGS

	Pounds per acre
Ammonium Sulfate 	150
Cyanamid	150
Nitrate of Soda	200
Ammonium Nitrate	100
10-6-4	300
6-12-18	300
8-16-12	300

|| Not available in 1944-45.

17. SIDE DRESSINGS

Two thirds of the rates listed in item 16 above.

18. PEAT SOILS

(Fertilizer broadcast. Reduce rates by one half if fertilizer is applied in or along the row)

Crop	Grade	Pounds per acre
Corn for grain.....	0-20-20	300
Corn for ensilage	0-10-20	350
Hay		
Small grains	0-12-24	300
Small fruits		
Pasture	0-10-20	250
	0-12-24	200
Potatoes	0-9-27	400
	0-12-36	300
Onions, carrots, rutabagas, and truck crops	3-9-18	1,000
	3-12-12	1,000
	0-9-27	800
	0-12-36	600

UNIVERSITY FARM, ST. PAUL 8, MINNESOTA

Cooperative Extension Work in Agriculture and Home Economics, University of Minnesota, Agricultural Extension Division and United States Department of Agriculture Co-operating, Paul E. Miller, Director. Published in furtherance of Agricultural Extension Acts of May 8 and June 30, 1914.

UNIVERSITY OF MINNESOTA



3 1951 D02 961 961 N