Pesticide Supplies and Requirements

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THE VOLUME OF PESTICIDE business handled by U. S. producers during 1957 was about the same as in 1956, according to the chemical industry. If general economic conditions do not alter the situation greatly, if rainfall in the United States remains generally near normal, and if export demand holds, 1958 can be expected to bring sales at or above the 1957 level. New uses being developed for pesticides tend to broaden the market for these materials and increase total U. S. consumption. There is added emphasis upon desiccants, nematocides, algaecides, soil fumigants, internal medicants for livestock, rodenticides, and selective herbicides.

Production of synthetic organic pesticides appears to have been slightly lower in 1957 than in the previous year (Figure 1). This is true for major insecticides (Table I), but not for the weed killers 2,4-D and 2,4,5-T. Imports of pyrethrum (flowers and extract) and rotenone (roots) averaged about the same as in recent years (Table II).

During the summer of 1957 rains favored many insect infestations. Against these the application of large quantities of pesticides was required in much of the South and Midwest. However, the growing season was up to a month late in widespread localities, thus slowing the normal early-season movement of pesticides in these areas. Drought prevailed in the Northeast, crops being killed outright or stunted severely in many parts of that region. Either wet or dry weather, if excessively so just prior to or during the growing season, affects adversely the demand for pesticides along with other supplies for crop production.

Exports of pesticides have increased steadily for several years. Their value for the crop year ended Sept. 30, 1957, amounted to $85,909,000 (Table III). Beginning with January 1958, the Bureau of the Census will provide more detailed reports of pesticide exports. Categories have been established for organic phosphorus insecticides, "poly-

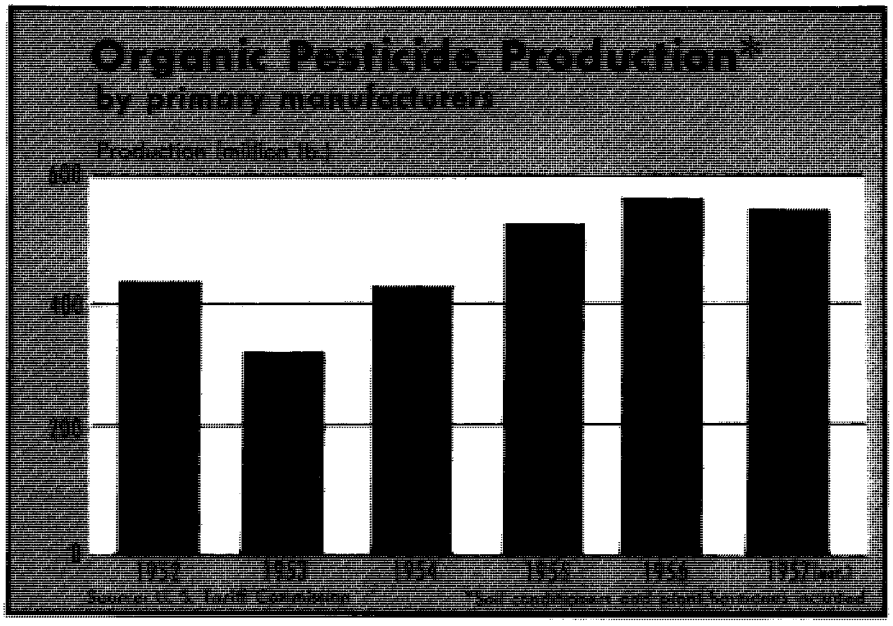


Table I. Pesticidal Chemicals: Production by Crop Years

	1954–55 (1,000 lb.)	1955–56 (1,000 lb.)	1956–57 (1,000 lb.)
Aldrin, chlordan, dieldrin, endrin, heptachlor, and toxaphene	63,881	80,418	73,914
Benzene hexachloride (gamma)[a]	8,582	13,535	9,376
Calcium arsenate	3,566	26,400 (estd.)	22,000 (estd.)
Copper sulfate	144,104	146,056	143,592
2,4-D acid	33,100	29,000 (estd.)	32,258
DDT	110,550	137,747	129,730
Lead arsenate	13,952	13,250	12,500 (estd.)
2,4,5-T acid	2,475	4,501	5,494

[a] Does not include lindane.
SOURCE: U. S. Tariff Commission and Bureau of the Census.

Table II. Imports of Pesticides by Crop Years

	1954–55 (lb.)	1955–56 (lb.)	1956–57 (lb.)
Pyrethrum flowers	5,119,670	4,703,055	5,662,229
Pyrethrum extract[a]	153,227	135,566	104,050
Total pyrethrum, approximate flower equivalent	7,643,994[b]	6,962,588	7,396,395
Rotenone (as cube root)[c]	5,953,561	6,349,981	6,223,722

[a] Mostly African containing 20% pyrethrins, roughly 120 lb. extract per ton of flowers.
[b] Revised figure.
[c] Whole root and powder, largely from Peru.
SOURCE: Bureau of the Census.

Table III. Pesticide Exports by Crop Years

Material and Census Code Number	1955-56 (1,000 lb.)	1956-57 (1,000 lb.)
Benzene hexachloride, gamma basis, 1% gamma or more, except formulations with 20% or more sulfur, 820583	3,537	2,200
Calcium arsenate, 820300	1,071	1,859
Copper sulfate, normal and basic, 820100	66,461	68,965
DDT, 25% or more, DDT basis, 820580	54,821	61,069
Lead arsenate, 820200	2,084	1,432
Nicotine sulfate, 40%, 820010	294	453
Paradichlorobenzene, 820560	2,200	2,512
Pyrethrum extract, 820530	128	154
Sulfur formulations, 20% or more sulfur, 820588	11,452	5,116
Sulfur, agricultural n.e.c.[a] except soil sulfur, 820589	7,578	11,950
Weed killers, 820587	19,793	19,963
Agricultural insecticides and fungicides n.e.c., 820590	98,970	104,782
Household and industrial disinfectants, 820900	7,877	8,463
Household and industrial pesticides n.e.c., 820600	17,503	17,945
Total [b]	293,769	306,863
	($1,000)	($1,000)
Value of pesticide exports	80,779	85,909

[a] Not elsewhere classified.
[b] Not true totals of gross weight exported because BHC and DDT are reported only in terms of the active ingredient.
SOURCE: Bureau of the Census.

Table IV. Manufacturers' Stocks of Pesticides Sept. 30, 1957

(technical basis)

Material	All stocks reported as of Sept. 30, 1957 (1,000 lb.)	%age of stocks reported as formulations	1957 stocks as %age of 1956 stocks (paired reports only)
Aldrin, chlordan, dieldrin, endrin, heptachlor, toxaphene	32,477	19.3	108
BHC, including lindane (gross basis)	21,220	...	...
BHC (gamma basis)	5,916	36.0	103
Calcium arsenate	8,259	15.3	168
Copper fungicides	9,328	7.6	80
2,4-D (acid basis)	17,368	40.9	177
DDT	24,252	36.3	77
Fumigants, grain and soil	49,636	...	...
Lead arsenate	3,101	25.0	65
Miticides, miscellaneous	1,317	58.3	85
Organic phosphorus compounds	7,722	37.6	106
Sulfur, ground	30,282	53.6	87
2,4,5-T (acid basis)	4,327	40.6	307
Other fungicides	9,576	31.1	92
Other insecticides	9,191	42.6	130
Other weed killers	16,103	47.8	109
Miscellaneous, including rodenticides	3,400	...	...
Total	247,559	38 6	103

chlor" insecticides, fungicides, and fumigants, all of which were formerly included under the basket code (820590) for miscellaneous agricultural pesticides. Reports of DDT exports will be shown under three codes: technical (100%), 75% formulations, and mixtures containing 20 to 74% DDT. In addition, 2,4-D and 2,4,5-T will be reported in one code separate from other weed killers. These additional export codes will be very helpful to those concerned with the movement of pesticide supplies.

Carryover stocks of pesticides on Sept. 30 averaged about as great in 1957 as on the same date a year earlier, according to a recent survey by the U. S. Department of Agriculture (Table IV). Stocks of DDT were appreciably lower than in 1956, owing to reduced production and increased exports. Inventories of 2,4-D and 2,4,5-T, as well as calcium arsenate, were higher. Benzene hexachloride stocks were close to the 1956 figure. Active development of the newer organic phosphorus insecticides, notably for the control of resistant strains of boll weevil on cotton, is largely responsible for the higher level of inventories of this class of materials. Sixty-one per cent of end-of-season stocks were technical, unformulated chemicals. A year previously the proportion was 72%. In the comparison of 1957 stocks with those of 1956, figures have been excluded for the few manufacturers who reported for only one of these years. Principally for this reason total poundages shown in Table IV, when divided by the figures given for "percentage of 1956 stocks," will not give the 1956 figures for total stocks as published a year ago.

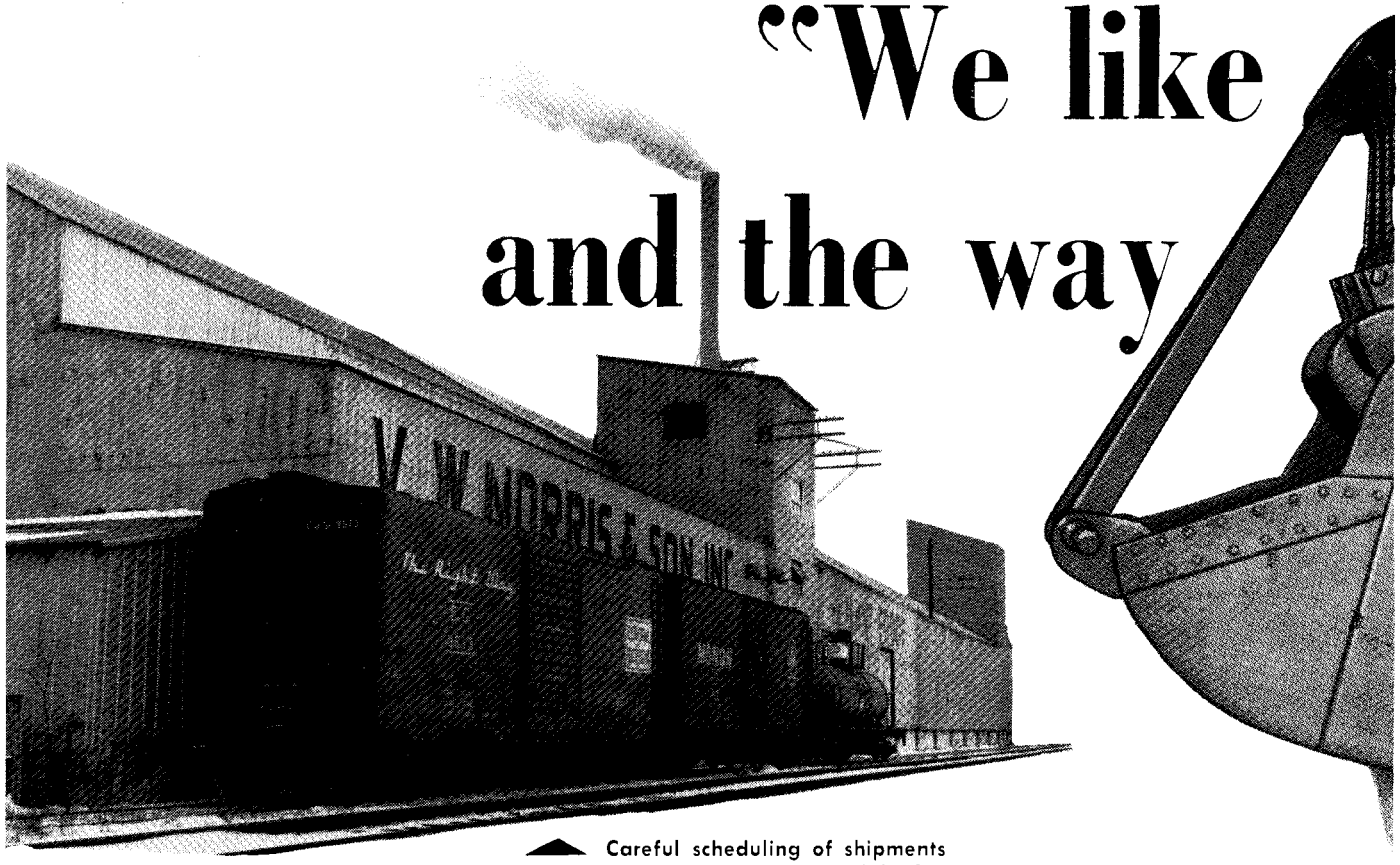
Estimates of minimum requirements of major pesticides for 1957-58 are shown in Table V.

As in 1957, federal and state insect control programs in the coming season will take large amounts of pesticidal chemicals. The cooperative battle to eradicate the imported fire ant in the South will require treatment of 800,000 acres with dieldrin or heptachlor by midsummer. Plans for the 1958 phase of the gypsy moth eradication project in the northeastern United States are being developed. Spraying of western forests each year for spruce budworm control generally consumes sizable quantities of chemicals. Populations of the European corn borer, according to the survey made last fall, have declined in the eastern United States and built up in most north central states, reversing the trend of recent years. The 1957 fall survey of grasshopper conditions indicates potential threatening or severe infestations of large cropland areas in 1958, especially in Wisconsin and Minnesota. Much rangeland in the Texas Panhandle, eastern Colorado, and central Montana will require close watch for grasshopper infestations this spring.

Table V. Estimated U. S. Minimum Requirements of Major Pesticidal Chemicals for 1957-58

Material	Minimum Requirement (1,000 lb.)
BHC (gamma basis)[a]	8,000
Calcium arsenate	15,000
Copper sulfate[b]	25,000
2,4-D acid	25,000
DDT	65,000
Lead arsenate	10,000
Pyrethrum (flower basis)	7,000
Rotenone (cube root)	6,000
2,4,5-T acid	2,500

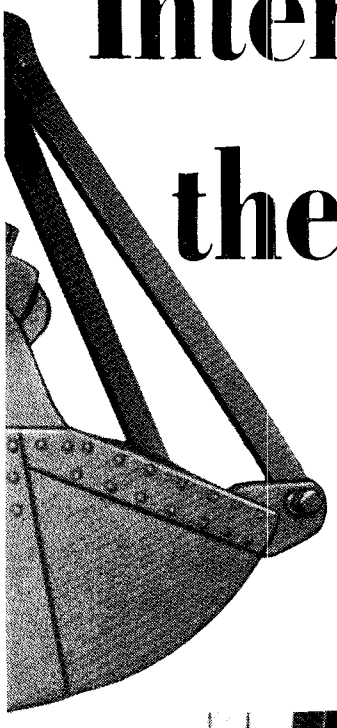
[a] Includes 99% (lindane) grade.
[b] Includes all agricultural uses (fungicides, minor plant nutrients, etc.).

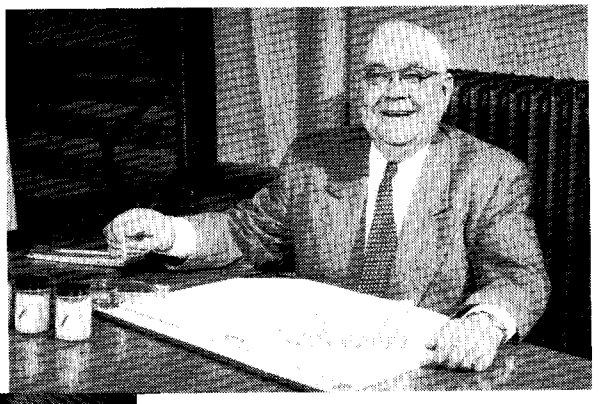


Careful scheduling of shipments puts International's Triple Super at the Norris plant to meet peak-season demands. The Norris plant, a crane-type installation, was built in 1946.

R. W. (Dick) Thatcher, sales manager, and Plant Superintendent Walker Elliott inspect the uniformity of granular 5-20-20. The company produces 12 different grades of granulated plant food, all sold within the rich crop and livestock area surrounding Rushville.

International's Triple they do business"



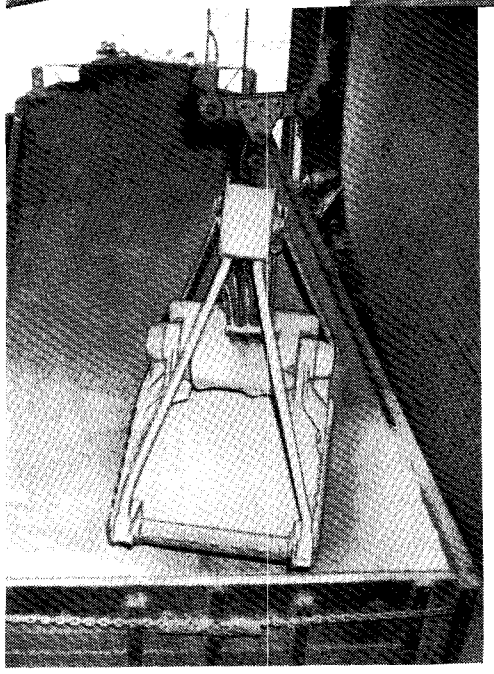


says

A. C. NORRIS,

president

V. W. Norris & Son, Inc.
Rushville, Indiana



Nearly all materials handling, including the unloading of trucks, is done by crane. All production employees are trained to operate crane ... keep clam-shell operating round-the-clock in peak seasons.

INTERNATIONAL'S personalized service and quality product have helped V. W. Norris & Son build a healthy demand for granular fertilizer around Rushville, Indiana.

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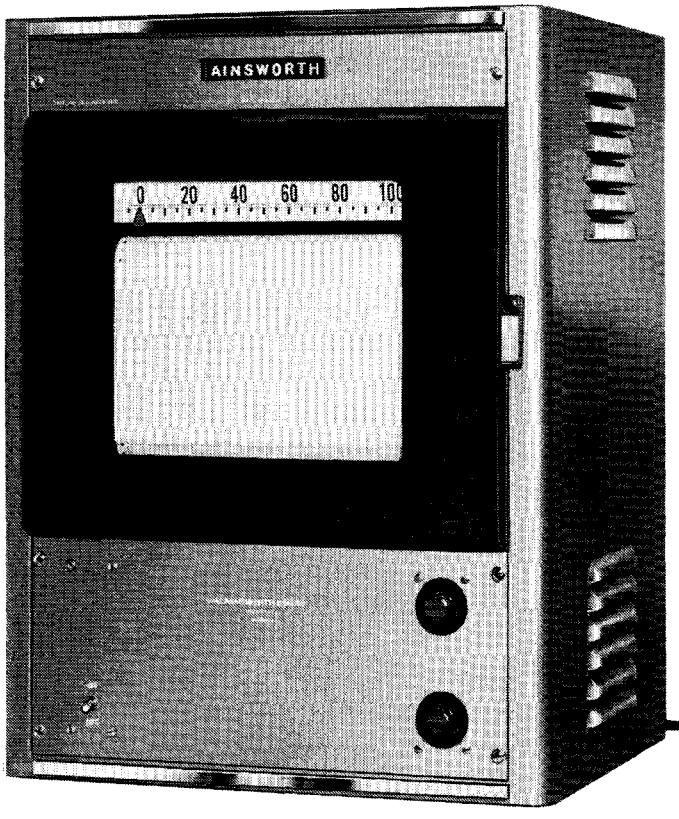

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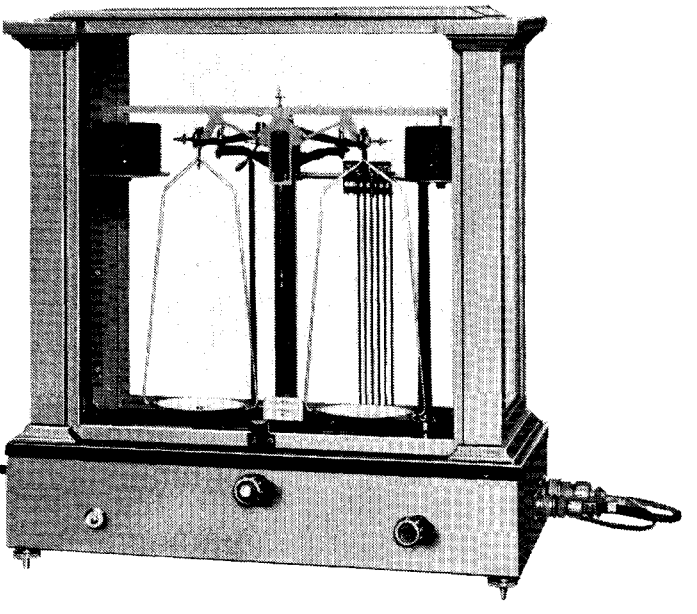

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TECHNICAL SECTION

MARCH 1958 Volume 6, Number 3

JOURNAL OF Agricultural and Food Chemistry

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