

Sodium chlorate continues to be a cheap and effective inorganic chemical for the non-selective control of weeds. About 12 percent of U. S. production is consumed in weed control and crop defoliation. Sodium chlorate is almost the only herbicide applied for soil sterilization prior to asphaltting parking lots, driveways, etc. It is applied in State programs to control noxious weeds, and is used industrially along railroad rights-of-way, etc. Small amounts are used for agricultural weed control, as along ditch banks. The chief farm use is probably for cotton defoliation. U. S. total consumption for weed control is believed to be about 24 million pounds, down somewhat owing to competition by organic herbicides. Considerable borax (perhaps 20 million pounds) is used mixed with the chlorate to eliminate fire hazard in both weed control and crop defoliation.

Sodium arsenite usage in agriculture is declining because of the hazard from run-off and from the attraction of the salty taste to livestock. Some is applied to kill off potato foliage before harvest; small quantities are used as an algacide in farm ponds.

2,4-D (2,4-dichlorophenoxy acetic acid) production has risen rapidly to 63 million pounds in 1965, an increase of 37 percent in two years. Production in the first seven months of 1966 was 39,811,000 pounds, up 7 percent over the same period a year ago. 2,4,5-T production also has risen; 1965 production amounted to 11.6 million pounds, up 28 percent from 1963. 2,4,5-T produced through July in 1966 amounted to 8,235,000 pounds, up 27 percent from the first seven months a year ago. Exports of 2,4-D and 2,4,5-T appear to have declined. However, unlike previous years the data for 1965 include only technical material. Large uses of 2,4-D in the United States are for the control of weeds in corn and small grains. U. S. disappearance of 2,4-D during the 1965 season amounted to 50.5 million pounds, that of 2,4,5-T was 7.2 million pounds. These disappearance figures, however, include the military shipments to Viet-Nam.

Many proprietary herbicides have been developed which have advantages on specific crops and against particular types or species of weeds. Production of 2,4-D and 2,4,5-T acids increased nearly 50 percent in the period 1962 to 1965. Between the same years production of all other synthetic organic herbicides more than doubled:

	Production of 2,4-D and 2,4,5-T acids	Production of other organic herbicides
1962	51,366,000 lb.	51,913,000 lb.
1963	55,402,000	64,626,000
1964	65,148,000	93,909,000
1965	74,921,000	112,855,000

MCPA (methylchlorophenoxy acetic acid) is related to 2,4-D but costs much more to produce. It is in general use to control weeds in flax. North Dakota reported 1.1 million pounds used in 1965 of which 730,000 pounds were on flax. The U.S. market for MCPA has been estimated at about a million dollars.