

PROVEN CHEMICAL WARFARE AGENT PRECURSORS

Number of production steps away from:

<u>Precursor Chemical*</u>	<u>Mustard gas</u>	<u>Tabun (GA)</u>	<u>Sarin (GB)</u>	<u>VX</u>
Sulfur dichloride	1	-	-	-
Thiodiglycol	1	-	-	-
Ethylene	1-2	-	-	-
Vinyl chloride	1	-	-	-
Dimethylphosphoramidic dichloride	-	1	-	-
Methylphosphonyl difluoride	-	-	1	-
Methylphosphonyl dichloride	-	-	1-2	-
Ethyl hydrogen methylphosphonite	-	-	-	1
Methyldichlorophosphinepo	-	-	2-3	2-3
Phosphorus trichloride	-	3	2-5	3-4
Phosphoryl chloride	-	2	-	-
Dimethylamine	-	2	-	-
2-Diisopropylaminoethanol	-	-	-	2

* Using chemical process technology as it existed 25 to 45 years ago.

Source: Julian P. Robinson, University of Sussex senior fellow.