Three herbicides were tested at Shambat Horticultural Research Station, during 1992/93 and 1993/94 winter seasons, to evaluate their efficacy in controlling weeds in direct-seeded onion. These were Ronstar 3-[2,4-dichoro-5-(1-methylethoxy) phenyl]-5-(1, 1-dimethylethyl)-1,3,4-oxadizol-2(3H)-one, Stomp N-(ethylpropyl)-3,4-dimethyl-2,6-dinitrobenzenamine; and Goal, 2-chloro-l-(3-ethoxy-4-nitrophenoxyl)-4-(trifluormethyl) benzene. The three herbicides were applied as split postemergence treatments at the following rates: 0.15+0.15, 0.3+0.3 and 0.6+0.6 L ha" for Ronstar; 0.05+0.05, 0.1+0.1 and 0.2+0.2 L ha" for Goal; 0.5+0.5, 1.0+1.0 and 2.0+2.0 L ha" for Stomp. These rates resulted in significant increase in number of leaves per plant, bulb diameter and final bulb yield of onion. The herbicides proved, at all rates, to be effective in controlling both annual broad-leaved and grassy weeds.