n a similar way to carbon, the nitrogen source is under-stood to regulate secondary metabolism.Actinomycete isopenicillin synthase wasfound to be sensitive to ammonium levels (Demain, 1986).However, Zhang et al. (1996) found ammonium to stimu-late an antibiotic produced by Streptomyces griseofuocus.Control of ammonia concentration during the mid-cyclewas found to be important in the optimization of idiophasesecondary metabolite production (Junker et al., 1998),though this may reflect the role of nitrogen in growth pro-motion.The use of unsuitable amino acids as a nitrogen sourcecan inhibit good synthesis of secondary metabolites(Ahronowitz, 1980; Martain and Demain, 1980).Multi-input feed strategiesmay be of use in process intensification, after optimizationof the nitrogen type and concentration at different fermen-tation stages