

The invention relates to a process for the manufacture of sulphur-containing fertilizers comprising the steps of: (a) mixing ammonia, phosphoric acid and water in a reactor unit to obtain an ammonium phosphate mixture; (b) introducing the mixture obtained in step (a) into a granulator unit to obtain granules, wherein a liquid phase comprising elemental sulphur is brought into contact with ammonia, phosphoric acid and water in the reactor unit in step (a) or is introduced in the granulator unit in step (b). The invention further relates to sulphur-containing ammonium phosphate fertilizers, to the use of these sulphur-containing fertilizers to promote the growth of agricultural products and to the agricultural products thus-obtained.