ANDY SARYOKO. Seed System and Invigoration Technology to Support Availability of Good Quality Soybean Seed in Banten Province. Under direction of SATRIYAS ILYAS and MEMEN SURAHMAN.

Research divided into two sub researches. Research 1: Soybean seed system in Banten Province. The aim of research 1 was to study soybean seed availability system in Banten Province. Research 2: Invigoration technology to improve seed vigour, plant growth and yield of soybean. The aim of research 2 was to get and to apply invigoration technology to improve seed vigour, plant growth and yield of soybean. Result of research 1 showed that soybean seed system in Banten Province has used Jabalsim pattern with some modification. Result of SWOT analysis showed position of the system was in 1st quadrant with aggressive strategy as best strategic planning: (1) improving knowledge of seed growers in producing seed, maintaining and improving quality of the seed produced by providing extension service and training, and supervising by Seed Supervising and Certification Office (BPSB); (2) making legal corporation (MoU) between seed growers and PT SHS; and (3) increasing seed production to fulfill the demand of soybean seed. In order to fulfill the need of soybean seed in Banten Province, Jabalsim pattern can be used with better seed production planning by empowering local seed growers. Map of center production area and plan of planting can be helpful to make better seed production planning. Result research 2 showed that matriconditioning using powder of burned rice hull plus commercial Rhizobium inoculant improved seed viability and vigour. This invigoration treatment also improved plant growth and yield by increasing effective nodules, filled pod, yield per plant, yield per plot and potential of yield better than control. Seed invigoration treatment before planting did not influence quality of the seed produced. Seed invigoration using matriconditioning plus Rhizobium should be recommended to be applied by seed growers in order to improve soybean seed quality and to increase soybean production in Banten Province.

Keywords: matriconditioning, Rhizobium inoculants, seed quality, seed treatment.