An investigation entitled "Seed Quality of Soybean (Glycine max (L.) Merrill) as Influenced by Environment" was undertaken in view of the objectives i.e. (1) to study the seed production feasibility in different seasons and; (2) to study the effect of seasons on different parameters of seed quality, storability of seed and changes in physico-physiological and physico-biochemical components during storage. The experiments were carried out in different independent parts during July 2002 to May 2004 at Marathwada Agricultural University, Parbhani. To study the seed production feasibility, five soybean cultivars viz. JS-335, MAUS-81, MAUS-71, MAUS-47 and MAUS-61 were sown in four replication as per the recommendation in Kharif (July 7, 2002), Rabi (Oct. 17, 2002) and summer (Dec. 28, 2002) seasons and observed for different growth and seed yield characters. The results revealed that the Kharif was found to be the best season for soybean seed production irrespective of varieties. However, if crop failed its seed viability due to rains or field weathering in Kharif season at the time of maturity. Seed production may be taken
in the summer season looking to comparable yield. The variety MAUS-71 and MAUS-81 followed by JS-335 and MAUS-61 were found to be most ideal and stable over year round cultivation and best suited for seed production in *Kharif*, *Rabi* and Summer season. The variety MAUS-47 was found most unstable nature for yield performance in all the seasons.

To study the effect of seasons on different parameters of seed quality, storability of seed and changes in physico-physiological and physico-biochemical components during storage, the soybean seed of varieties MAUS-71, MAUS-47 and MAUS-61 produced in *Kharif*, *Rabi* and summer seasons were stored in gunny bags and polylined gunny bags. The monthly and bio-monthly observations for different seed quality parameters were taken during storage. The results revealed that the seeds *Kharif* season escaped from field weathering or rains was better storer followed by seeds of summer season than the seeds of *Rabi* season. Among the varieties, it was also seen that the variety MAUS-71 followed by MAUS-47 was better storer than the variety MAUS-61. It was also noticed that the storage of seed in polylined gunny bags had significantly increased the storability of soybean seed over the seed stored in gunny bags. The physico-physiological and physico-biochemical components i.e. germination, root-shoot length,
vigour index, dry matter content, viability as tested by TZ test, protein and oil content were found to be decreased, whereas moisture content and electrical conductivity increased during storage, as storage period advances irrespective of seasons, varieties and storage containers. In general, it could be stated that the germination above minimum seed certification standard (70%) was maintained upto 14, 13 and 10 months in the variety MAUS-71, MAUS-47 and MAUS-61, irrespectively, whereas upto 12, 13 and 11 months, germination above MSCS were maintained in the seeds of Summer, Kharif and Rabi seasons, respectively irrespective of varieties, seasons and storage containers. However, the seed stored in polylined gunny bags was successfully maintained one month more above MSCS than the seed stored in gunny bags irrespective of seasons and varieties.