The cadmium-accumulation patterns in soybean various organs showed that dead leaves fell with the same cadmium (Cd) concentration when alive and that the Cd amount of the whole leaves (including petioles and fallen leaves) maintained almost same quantity from the seed-formation stage (R5) to full-maturity stage (R8). In the case of leguminous crops the trifoliolate leaf and pod and seed with same node form one sink-sauce unit and it is known that they are related mutually. Cd concentration of trifoliolate leaf differed greatly according to the position of node. However, there were no relations of Cd between trifoliolate leaf and seed with same node. These results were suggested that Cd directly absorbed from soil influences to seed Cd concentration more greatly than Cd translocated from leaves.

Soybean shows seeds Cd concentration higher than other leguminous crops. Soybean is unique crops with very high protein content (6 - 7%) in seeds. Since the dried weight and the nitrogen accumulation amount of shoot at vegetative stage, it is necessary to accumulate 70 - 80% of total nitrogen amount for growth of seeds after the full-bloom stage (R2). It is reported a possibility that soybean has high ability to resolve soil nitrogen into available form as compared with corn etc. Soybean is expected to absorb nitrogen and Cd bonded organically together in the process which resolves soil immobilized nitrogen. Therefore, it is supposed that absorption of Cd is reduced by application nitrogen which is easy to absorb for growth of seeds at suitable stage. In the examination conducted using pots filled with Cd-polluted soil Cd, seed Cd concentration of the soybeans which carried out the nitrogen supplement application decreased. Nitrogen supplement application at the full pod stage (R4) was more effective than at full seed stage (R6) for reduction of seed Cd concentration. Moreover, the tendency that seed Cd concentration decreases as the amount of nitrogen supplement application (at R5) increases was seen.