Chicken farming activities commonly are performed in our country. Facilities especially are concentrated in Marmara and West Black Sea regions and there are 164 million units of broiler chicken and 71 million laying hens in this area. Everyday approximately 30,000 tons chicken manure waste are produced in these plants. These big amounts of waste disposal cause great problems to the environment. The formation of odour and flies are at the top of these problems. These problems can be eliminated by using poultry manure as a raw material at biogas plants and additionally electricity can be produced. Processed poultry manure in biogas plants becomes a stable and is converted to organic fertilizer. In this paper, poultry manure usage at biogas plants and feasibility work of different type of co-fermentation scenarios have been done. Results showed that co-fermentation of poultry manure and cow manure in cylindrical and wet processed systems is the best among these alternatives.