I. INTRODUCTION

A. Background

1. Agricultural Sector and Agroindustry

In GDP, the contribution by the sector of agriculture including fishery and forestry, it becomes around 16% to 17% in it during year of 2000 to 2004. In case of manufacturing industry sector, it shares around 25% including agroindustry contribution (Appendix 1). But since the economic and financial crisis hit Indonesia at 1998, it is still influencing the economic development of Indonesia in terms of investment, industrialization, production, import and export. Nevertheless, the economic power of Indonesia is continuously rising by mostly the recovery of industry empowerment. The economic growth of Indonesia is very bright and steady now, and a good perspective is promised for future due to very rapid industrialization after economic crisis at 1998 (BPS, 2004).

More than 50% of about 200 million of population engaged in agriculture, it is justified to say that agriculture remains the largest sector in the Indonesian economy. Lesson learned from the current economic crisis is that agricultural sector not only the life saver during the crisis, but also becomes engine of growth for Indonesian economy. The national economic development policy has now placed the agriculture development as a priority and prime mover of the national economic growth. Particularly, an agroindustry is one of promising industrial sectors contributing GDP up, and rural and regional economic development along decentralization policy by the central government (MOA, 2004).

It is also noted that MOA has determined agribusiness as the grand strategy for the agriculture development with the vision: realization of prosperous society particularly farmers through the development of competitive, democratic, sustainable, and decentralized agribusiness. This statement means that agroindustry is a hope of economic growth in Indonesia, and it brings an economic development in rural economic empowerment.

2. Food Crops and Cassava

Food crops cover paddy, maize, cassava, sweet potatoes, soybeans, and others by the large area around 46.9 million hectares or 74.7% of the total area utilization (except Maluku and Papua). The ‘Big Three’ of food crops is, of course,
paddy, cassava, and maize with amount of 52,079,000 tons, 18,474,000 tons, and 10,910,000 tons respectively (BPS, 2004).

Among this big three, cassava is the most interesting crop from view points of its own character and huge potentials utilizing not only stable food, but also a raw material for agroindustry by which various kinds of cassava and tapioca based product are produced and consumed.

It is understood that cassava is a very potential raw material as tuber crop producing tapioca flour, cassava flour, and also producing byproducts such as “Onggok” which is a byproduct of crude tapioca processing and is utilized as a raw material for producing ketchup source, snack, cake, and mosquito coil (Barrett, 1987).

3. Crude Tapioca (Aci)

Tapioca starch is obtained from the root of cassava (manioc plant). At home industry of tapioca, the root is washed and rasped into slurry which is separated from the pulp by hand (so called “Onggok” or “Ampas”). Starch slurry is kept in batch pool for sedimentary processing. A crude tapioca is obtained from this sediment of starch after sun drying.

Thus such processing at home industry, crude tapioca is a coarse granule starch and it is called as “Aci” in Indonesian language. Aci is processed at refinery factory to be tapioca flour.

4. Small Scale Tapioca Agroindustry (SSTA)

An agroindustry is a key industry in Indonesia because of value added performance and natural resources utilization. Such agroindustry is huge to increase the Indonesian economics for the next decade (MOA, 2003).

Another point is UMKM\(^1\) empowerment. It is a resource of economic development from aspects of 1) technology, 2) productivity and 3) human resource. MOI also identifies that UMKM as regional economy activator is an industry producing commodities and services which are based on available natural resources (MOI, 2003).

\(^1\) Usaha Mikro, Kecil, dan Menengah (Micro, Small and Medium Enterprises)
5. Quality of Product by UMKM and Quality Assurance

A quality is critically important to ensure addressed to customers and end-users for the product in good quality. Regarding the quality of products by UMKM, MOI in the master plan (2000-2004) assumed them in specific conditions in comparison with the various products from abroad with high competitive ability such as lack of attention in hygienic aspect, still using inappropriate/prohibited food additional material, various quality products not fulfilling the standard, and not consistent quality. To improve such undesirable conditions and inconformity assumed, a quality assurance is a way to find solutions in processing, management and marketing rather than to approach by way of quality control.

A quality must be defined in terms of the demands of the market to be served, namely market acceptance, health and safety, stability or shelf life, consistency, and cost effectiveness. Modern quality assurance and philosophy are focused not on products, but rather on the processes used to produce them. The basic notion is that if one gets processes to work effectively the resulting products will automatically be good. (Brown, 1994)

In case of tapioca flour, it is ensured its quality by SNI indicating the standard of contents such as moisture, ash, HCN, mineral, contaminant and also whiteness degree and acid degree. Nevertheless, there is no standard available for crude tapioca (Aci) so far.

B. Research Objectives

Upon the results of overall review on agriculture, agroindustry, UMKM, quality of products, this research targets the Aci produced by SSTA as one of UMKMs from view point of quality assurance. This aims to develop the strategy in quality assurance necessary for SSTA to empower their performance. Accordingly, the objectives of the research study are:

1. to identify the factors regarding quality assurance including problems and issues in SSTA from view point of quality assurance, and
2. to develop strategy to conduct quality assurance in the targeted SSTA for their practical and operational application for future.

2 Standar Nasional Indonesia (National Standard of Indonesia)
C. Scope of Research

1. Target crop and commodity

The target crop and commodity are cassava and Aci. Cassava is one of big three crops in Indonesia and has a huge potential for agroindustry, and it is cultivated by farmer who supplies it to SSTA. Cassava is processed by SSTA in rural area producing the secondary raw material of Aci for tapioca industry. This kind of processing hierarchy can not be seen in other crops and commodity except a few crops such as Aren (Arenga pinnata) and sago (Maranta arundinacea).

2. Delineation of quality assurance

The study on quality assurance strategy development covers the quality of raw material, processing of cassava, and marketing for Aci. Due to processing hierarchy (cassava-Aci-tapioca), quality assurance should cover the quality of cassava and also the quality of Aci that there is no standard to identify its characteristics in term of quality of commodity addressed to customers and end-users.

3. Target area

The target area for the research is Sukaraja district (kecamatan) in Bogor regency (kabupaten) and north Bogor district in Bogor city. This is because Sukaraja district is the highest cassava production area among 35 districts in Bogor regency, and is also a high SSTA density operating Aci production. Another reason is an access to approach to there from the main access road for carrying out the site survey.

4. Strategy development

The strategy development is focused on both cassava producer and SSTA, not including tapioca producer. This is based on rural economic contribution and empowerment of both of them. Upon the developed strategies, the necessary measures are deployed in forms of a linkage between industry and related institutions or ABG\textsuperscript{3} approach, some conducive supports by the local government, and minimum and possible self institutional building for SSTA in rural area.

\textsuperscript{3} Academy, Business, and Government linkage
D. Outcome and its Application

The outcome of this research is expected that an approach by quality assurance might be contributed to empower SSTA to produce better quality Aci addressing to their customers, particularly local food industries in the target area of Bogor.

For instance, if the quality standard of Aci would be realized upon the necessity and requirement by Aci producer, a great progress could be seen and also realized at their better performance of quality assurance. This is a kind of a real conducive support for both cassava producer and Aci producer.

The measures to be proposed basing on quality assurance oriented are also the outcome of this research which might be applied to other small scale agroindustries according to their requirement and desire of improving the quality of similar commodities, the capability of better processing by their own way, and the value added mind and performance at each SSTA and other sector of small scale agroindustries.