

THROUGH TOURISM, THE RESULTS OF RESEARCH IN AGRICULTURE CAN BE DISSEMINATED TO THE PUBLIC DIRECTLY, THE PEOPLE BECOME HAPPY AND HAVE A POSITIVE IMPACT AND SUSTAINABILITY WILL BE MAINTAINED WELL.

By: Teguh Suprijanto *



Chocolate,who does not like it, almost everyone, especially the kids will like the chocolate, from candy, chocolate bars, chocolate drinks, and pastries made from chocolate. Did you know "chocolate fruit", what does it look like ?, and to be consumed into refined products such as those mentioned above, how does the manufacturing process ?

Chocolate, that name if it has undergone a process of processing, before it was in the process is generally called with cocoa or cacao, in the language of scientific called *Theobroma cacao* estimated originally from Central and South America, then spread to different parts of the world, especially in tropical countries, including Indonesia. In Indonesia has been recognized three varieties of cacao, which are Criolo, Forastero and Trinitario is a hybrid result of crossing.

In Indonesia, there is a research center of coffee and cocoa in the short Puslitkoka or Indonesian Coffee and Cocoa Research Institute (ICCRI). Coffee and cocoa research center of Indonesia is located in the village of Kaliwining, sub district Rambipuji, Jember. Occupying an area of 160 hectare which are mostly coffee plantation and cocoa ("chocolate"). As a research institution established since the Dutch colonial era on January 1, 1911 with the name of at that time Besoekisch Proefstation. After experiencing several changes in both name and manager, is now functionally Puslitkoka are under the Agricultural Research and development Agency, Ministry of Agriculture of the Republic of Indonesia, while structurally maintained by the Research Institute of Plantation Indonesia - Indonesian Plantation Research Association (LRPI - APPI).

* Advisory Board of AWAI, The Indonesian of Agriculture Tourism Association

Puslitkoka is a non profit organization that obtained the mandate to conduct research and development in coffee and cocoa nationally, according to the Decree of the Minister of Agriculture of the Republic of Indonesia No. 786 / Kpts / Org / 9/1981 dated October 20, 1981. Also as a provider of data and information relating to the coffee and cocoa.

Main Duties and functions of this institution is: first do some research in order to obtain technological innovation in the field of cultivation and processing of coffee and cocoa; second, conducting services to farmers / coffee and cocoa planters in all regions of Indonesia to solve problems and speed up the transfer of technology; and the third is to build capacity in human resources, facilities and infrastructure to support research activities and services.

Previously, over the years the institution or research center is not known by most people, only researchers, both from domestic and foreign issues related to coffee and cocoa, coffee and cocoa farmers, and perhaps the institutions associated with the only thing that often comes to the area, especially its location in the countryside. By the local community the locations only known as the area of coffee plantations and "chocolate garden". While people have never tasted the "chocolate", whether it be cookies, candy or chocolate bars, because in that area there is no "chocolate factory". In the town of Jember, if the people want to buy chocolate candy, or candy bars, they have to buy into a large store or now known as super market to be able to get the best ones and are not Indonesian brands or homemade Indonesia, it was sometimes rarely to be found it. They assumed, delicious chocolate that came from abroad, mainly from European countries, whereas in Europe there are no trees or plants producing cocoa , cocoa grown only in tropical countries, like Indonesia, ironic. It is understandable for many years Indonesia has been exporting cocoa beans abroad and did not process in the country into refined products such as a variety of chocolate products as well as in Europe, Indonesia is a country exporter of cocoa beans to the three largest in the world, after Ivory Coast and Ghana.

Realizing this, because Puslitkoka feel the "benefits are less" for the community, the agency is now making it open for the public and "friendly" to the society. If it had been to visit just have to apply and get permission, and it's not easy, it takes up to several days to get the approval of local authorities, now every time people can visit to the place, and only required notification, especially when the party or group members a lot, because for anticipate the number of visitors. Nowadays Puslitkoka visited by many tourists, especially school children, college students, and general public who are interested in the world of agriculture, or better known as Agro Tourism and Education as well.

Puslitkoka transformed to develop education-based travel with / learning to the general public, especially the students, academics and farmers hope that after attending the learning at the research center, can bring home a lot of knowledge about coffee and cocoa. Education is done here fairly complete, including a research center management will present a whole research process coffee and cocoa, even up into derivatives (superior products). It is popular with the public such as coffee and chocolate-making process would be taught here, including how picking coffee cherries

with direct practice in the garden. Moreover, it also taught the process of designing and using tools such as coffee and cocoa production machines are quite sophisticated. Especially for farmers, will be provided a special class certainly no less interesting. All the learning process here will be packed to enjoy the atmosphere with friendly guides like when you're on vacation in a tourist spot. A number of on-site support facilities have also been provided including a guest house, a place of worship, toilet and others to enhance the concept of vacation while studying the atmosphere is cool and beautiful estate with panoramic beauty of nature.

Additional on-farm activities that can be enjoyed in the gardens of the pilot is cocoa cultivation practices including grafting and side grafting, pest and disease control, intercropping, and organic fertilizer waste treatment outcome cocoa and coffee. The research center apply the concept of zero waste. All waste can be processed for reuse.

In the demonstration gardens, visitors can see how the research on cocoa and coffee being made. Two of them are the development of two new cocoa clones namely **Manasa** and **Hanasa** Puslitkoka researchers found. Two clones have not yet officially released because it is still in the testing phase multi-location. The term clone is still new hope.

Another activities in the garden, visitors can see the process of postharvest or *off farm*. Puslitkoka has a variety of postharvest facilities that are open to visit, such as drying, fermentation, machinery manufacturing, to manufacture instant coffee and chocolate.

In it, the clerk processing the dried cocoa beans with a moisture content of 7 percent that has been fermented. Cocoa beans are then roasted, milled and forged. Forging results in the form of two major products, namely cocoa cake cocoa processed into cocoa powder and cocoa butter mixed with various other ingredients, such as milk and sugar, so be ready to eat chocolate.

The end result of this cocoa processing space there is in the form of cocoa powder, chocolate liquor is usually for materials or pastries, and chocolate bars or candy.

If the people want to enjoy all of the final results of processing coffee and cocoa into products ready to eat, there are also outlets at the end of the visit. This outlet sells a variety of coffee products, such as ginseng coffee and coffee from various regions in Indonesia. As for the chocolate products ranging from powder to dark chocolate.

These outlets become a kind of cover to see how the processing of coffee and cocoa from upstream to downstream. Not just for laymen but also the entrepreneurs who want to learn the business.

Therefore, the Minister of Research and Technology, Mr. M. Nasir inaugurated the site on May 20, 2016 into a Science and Technology Park or CCSTP in Jember. CCSTP is a transformation of Puslitkoka previously functioning as Commodity Science Center (PUI), the transformation into Science Techno Park is a form of synergy between academia, government, businesses and people.

Coffee and Cocoa Science and Technology Park is an area next to a professionally managed technology innovation in order to deliver results to all upstream and downstream businesses, particularly coffee and cocoa-based.

For Jember district itself, with the inauguration of CCSTP is a strategic move to produce new entrepreneurs with high competitiveness to boost economic growth Jember. Science Parks in Jember can also be a leading research institutes and superior in terms of technological mastery sustainable coffee and cocoa, as well as participate in an effort to improve the knowledge and competitiveness of community-based innovation and technology.

With the opening of this place became a destination of **Agro Tourism** and **Educational Tourism**, people can see first hand how chocolate was in production, the existing "factory" chocolate though small, they can be purchased directly at the site, see the process from A to Z, they are happy, cacao farmers happy, researchers are increasingly eager to produce varieties or new clones which are superior both to cacao and coffee. Society has felt the benefits of the results of research and existence ICCRI and stimulate the local business climate based cacao and coffee. Now no longer have to rely on chocolate from abroad, but from the country itself is more an indigenous / original. Thus sustained efforts will have an impact, because all the support, everybody happy ...!
