

Universidad Nacional de Colombia, Palmira campus: agricultural genesis and institutional social impact (1900-1944)

Universidad Nacional de Colombia, Sede Palmira:
Génesis Agrícola e impacto social institucional (1900-1944).

Néstor Fabio Valencia Llano¹, Gabriel Carmona Orantes²

¹Universidad Nacional de Colombia - Palmira. Faculty of Agricultural Sciences. Research Group on Social Education and Academic Environments. ²Universidad de Granada, Spain. Faculty of Educational Sciences.

*Corresponding author: nvalencial@unal.edu.co, gcarmona@ugr.es

Rec.: 06.10.2014 Acep.: 29.04.2014

Abstract

Several researchers and academics have argued that during the 1920s science and agriculture were joint in Valle del Cauca, favored by state policy on agricultural development and the creation of the Secretary of Industry. The above presumption raised doubts because it was necessary to increase knowledge of agrarian history and education in the region during the period 1931-1942, when it was written on a second regulation that allowed the creation of the Agricultural Institute of Valle del Cauca in 1934. The literature review found no research to address the genesis and emergence of scientific agriculture and agricultural education in the Valle del Cauca. The aim of this research was to "Rebuild the main agricultural and educational policies and their contribution to the genesis of scientific agriculture and the origin of higher agricultural education in the Valle del Cauca for the period of 1900-1944". The research concluded that the Act 132 of 1931, provided in a more positive way, the emergence of scientific agriculture in Valle del Cauca, as it permitted the pioneers of scientific agriculture to establish an Agricultural Institute in 1934 consisting of the Extension Service and the College of Agriculture, allowing the formation of professionals who lead science to tropical agriculture".

Key words: Scientific agriculture genesis, tropical agriculture, agricultural education.

Resumen

Numerosos científicos y académicos han sostenido que durante la década de 1920 se integró la ciencia con la agricultura en el Valle del Cauca, favorecida por una política estatal sobre el fomento de la agricultura. La anterior presunción generaba dudas porque faltaba ampliar el conocimiento sobre la historia agraria y educativa en la región durante el período 1931-1942, momento en que surgió una segunda normatividad sobre el fomento agrario que posibilitó instaurar en 1934 el Instituto Agrícola del Valle del Cauca. En la literatura revisada, no se encontraron investigaciones que abordaran la génesis e irrupción de la agricultura científica y la educación agrícola superior en el Departamento del Valle del Cauca. El objetivo consistió en "Reconstruir las principales políticas agrarias y educativas, y su contribución a la génesis de la agricultura científica y al origen de la educación superior agrícola en el Valle del Cauca en el periodo de tiempo comprendido entre 1900-1944". La investigación posibilitó concluir que la Ley 132 de 1931, fue la que facilitó de manera positiva, la irrupción de la agricultura científica en el Valle del Cauca, porque permitió a los pioneros de la agricultura científica, instaurar en 1934 un instituto agrícola conformado por el Servicio de Extensión agrícola y la Escuela Superior de Agricultura, permitiendo formar los profesionales que integrarían la ciencia con la agricultura tropical.

Palabras clave: Génesis agrícola científica, agricultura tropical, educación agrícola.

Introduction

Bejarano (1987, p 184), stated that in Colombia and in the Department of Valle del Cauca, the second agricultural revolution or scientific agriculture started in 1926 with the issuing of the Law for Agricultural Development (Law 74 of 1926), however, when checking secondary sources of literature no reports on Valle del Cauca having many institutional and/or educational inputs favoring such process and, particularly during the period 1931-1932, time when the Law 132 of 1931, which was oriented in the same direction, was approved. This forged doubts that encouraged the need for more timely study, which fully include the decades of the twenties and the thirties, to elucidate the context related to the genesis of scientific agriculture in the Department of Valle del Cauca.

If in the Valle del Cauca, the second agricultural revolution, was instituted with the issuance of Law 74 of 1926 -which according to Bejarano (1987), laid the foundations for modern agriculture- would not make sense the enactment of Law 132 of 1931 which sought to encourage scientific agriculture. In Valle del Cauca, in the light of this second law, was established in 1934, an agricultural institute, which included the agricultural extension and a school known as the ESAT (College of Tropical Agriculture of Valle del Cauca), on the institution there has been an overall lack of knowledge related to its origin, its mission and its correlation with the genesis and emergence of scientific agriculture in the department.

By failing to recognize with for conviction Bejarano's statements, it was necessary to analyze in context the two laws for agricultural and educational development, and formulate the research question: Which of the two laws agricultural development -Law 74 of 1926 or Law 132 of 1931 -, contributed positively to the origin of the ESAT of Valle del Cauca, and its relationship to the genesis of scientific agriculture?

From the above arose the need to rebuild the main educational and agricultural policies, and their influence on the origin of agricultural education in Valle del Cauca, represented initially as College of Tropical Agriculture Valle del Cauca, ESAT, and the today National University of Colombia, Palmira, in the period between 1900-1944.

Materials and methods

The research was contextualized in the Valle del Cauca and in the current Universidad Nacional de Colombia - Palmira, originally called: School of Tropical Agriculture Valle del Cauca, ESAT. The inquiry was addressed under the historical-educational approach, based on an inductive reasoning, promoted by the need to expand the frontier of knowledge related to agricultural higher education in the Valle del Cauca and the genesis of scientific agriculture in the department. In this sense, information was collected from the Universidad Nacional de Colombia - Palmira and the Governorship of Valle archives. By qualitative analysis of the information, with the Institutional Analysis method proposed by René Lourau (1975), the pretention was to understand, interpret and explain the reality of past situations that can contribute to explain the current events. By the inductive method empiric generalizations were made from specific environments. The Institutional Analysis method was applied historical setting to a training organization in the scope of higher agricultural education.

To achieve the objective consisted of rebuilding the main agricultural and educational policies, and their contribution to the genesis of scientific agriculture and the origin of higher agricultural education in the Valle del Cauca in the period between 1900-1944, the context of the agriculture in Valle was recognized at the beginning of the 20th century by several works related to agricultural and educational history of Valle del Cauca and Colombia.

Later, in the first years of the 20th century was exposed the need of teaching agricultural sciences in Valle del Cauca.

- Several journals of that time were checked.

- Historical documents on the management of various governors of Valle del Cauca and Colombia were studied.

- Documents of different educational and agricultural missions that sought to promote agriculture and teaching of agronomy in the Valle del Cauca were consulted.

- The primary sources were reviewed in the historical archives of the Universidad Nacional de Colombia - Palmira, the Library of the Institute of Scientific Research of Valle del Cauca INCIVA, the Luis Angel Arango Library of Bank

of the Republic, the Departmental Library Jorge Garcés Borrero and the Centenary Library in Valle del Cauca.

In the method used, the Institutional Analysis, for French institutionalists it has three moments the institution, the institution as Instituted, or the time of *Universality*, the institution as it is given to those who belong to it; secondly, the moment of *Particularity*, the institution as Instituting, activities that those belonging to the institution organized in order to achieve the satisfaction of their needs or problems; finally, the institution as Institutionalized or the moment of *Singularity*, where the above elements merge into a new moment of institutionalism. Institutional Pedagogy is constructed from a sociopolitical perspective; it is considered an anti-authoritarian critique to education. It is listed in the current "libertarian pedagogies" consisting of criticism of traditional education. René Lourau (1975), I based on the Hegelian dialectic, broke down the concept of institution in its three stages: *Universality*, *Particularity* and *Singularity*. The timing of the Universality is the positive unity of the concept, then the concept is fully true. The timing of the Particularity denies the preceding moment; any general truth ceases to be as soon as special conditions are applied within the heterogeneous and changing group of individuals who differ from others by their social origin, age, sex, status. Therefore, one should not confuse universality with the whole, which carries in itself its contradiction. Every idea is as "real" as its opposite, not in general, as claimed by skepticism but since it is embodied in the actions of individuals and communities. The moment of Singularity is the time of the refusal, resulting from the action of negativity on the positive unity of the universal standard.

Results and discussion

The medical doctor Evaristo García (1994, p. 133), in the late 19th century, proposed the inclusion of a marginalized social group, "rural farming communities"; he wanted to change the established social order which did not recognize the rural population. With his leadership, Garcia represented instituting human forces, who resisted the instituted and sustained:

Agriculture in Valle del Cauca, is, then, in hands of small owners of the popular masses and, while it is true that it gives

them well-being and personal independence, it does not provide them the education that social contact gives neither the required instruction to make the country protects from that branch of public richness (p. 133).

Therefore he sustained that through education, rural communities could be socially include, which with their great potential, could contribute to agricultural progress in Valle del Cauca, also contributing to the improvement of democracy required by the Colombian Nation - State.

Evaristo García, saw the possibility of constructing the ideal of agricultural progress, because the different agricultural production of commercial interest was in the hands of such social group; educating them would start the agricultural transformation and could debug further democracy. The rural peasantry in its territory, had discovered soil suitability for each crop, and possessed the cultural ancestral knowledge on the technical management of various crops in the tropics and the usefulness of wild fauna and flora potential for incorporation into agriculture. Through agricultural education training, the move towards the moral and technological progress will happen, so that continuing construction of roads, the market will be more dynamic towards the exterior and interior of the country:

Let us try opening the roads that put us in communication with the sea, improving internal roads to facilitate trade between cities and the crowd of farmers to markets, to create needs of civilized peoples, such as sanitation of unhealthy land, modern and hygienic building of comfortable rooms, the best made dresses for shelter and decency, food better prepared, the application of steam or electric engines for the benefit of the farms, education in the moral and intellectual sense for the development of the masses, and then trade and industry will progress proportionally and rise the country to a degree of civilization that make life more enjoyable (García, 1994. p, 134).

In relation to animal and plant species introduced into the country at that time, the predominance of extractive production systems associated with technological ignorance, and continuous adaptation of species to the tropical environment with various levels of resistance to

typical tropical diseases is highlighted. Some entrepreneurs could only rely on machinery and equipment generated by the industry, and its efficiency was associated with the agro-industrial processing of agricultural products factory.

Creation of the Experimental Agricultural Station of Palmira and the Agricultural Institute of Valle del Cauca

After several frustrations by the human forces that wanted to institute the scientific agriculture in the Department of Valle del Cauca, it was possible to materialize regulations that finally the Departmental Assembly was eliminating or replacing, the Law for the Agricultural Development, hope the beginning of studies on tropical agriculture in Colombia. For 1926, the Law 74 of 1926 was promulgated, it was about "Agriculture and Migration Development". In such direction, the government decided to conquer the agricultural areas under the paradigm of Agricultural Experimental Farms, the law stated: "The government will fund three national experimental stations, the closest as possible to the Capital city and belonging to the cold, temperate and hot weathers".

In the presidency of Miguel Abadia Mendez (1926-1930) the Secretariat of Industry of Valle del Cauca (Departmental Assembly of Valle del Cauca, 1926. Ordinance 21) was created by Governor Manuel Antonio Carvajal (1924-1926). Likewise, the functions of the Secretary of Industries were regulated, he should promote and develop trade in the agricultural, livestock and manufacturing industries, among others, encourage immigration, and promote the formation of agricultural colonies in the territory of Valle del Cauca. The first secretary, Ciro Molina Garcés took office and began his leadership on October 18, 1926 (Decree No. 1117, October 15, 1926); he proudly exposed the existence of an enabling environment for agricultural development; however in his diagnose the agriculture in Valle del Cauca did not leave unscathed::

(...) the rise of trade, favored directly by our roads, increasing manufacturing industries and transport, etc., but, except for coffee and partly for sugar cane, agricultural industries are in deplorable state of prostration and exploited with ruinous empiricism.

This first diagnosis would suggest that much of the regulation that had generated in-

stituting human forces to build the ideal of agricultural progress in the Department of Valle had been a dead letter. It should be noted that the Secretary of Industries of the Department, had a regulation that will facilitate his ideas; from the foregoing, the Ministry of Industries, supported by such regulations, would try to start the agricultural reform required by the society of Valle del Cauca from some time ago.

Molina began his management in accordance with the interests of the departmental government, the national executive and current regulations; just missing was the budget availability to materialize his thought. To run its agricultural program he required technicians for organization and direction of the agricultural reform; in this regard the agronomists Carlos Duran Castro, Emiliano Pereañez and René Hauzeur were hired. In the particular case of Duran Castro, he considered the need to send him to the United States to study the vegetative cycle of various crops, and then he could lead the agricultural services of Valle del Cauca (Molina, 1927, pp. 209-210).

Due to the lack of time, the most practical for Molina would be to make technology transfer with tropical crops or other crops that had already been improved in the United States, which apparently would shorten the time to achieve the ideal of agricultural progress related to its proposal: "The scientific exploitation of the soil". With this, the first moment of Institutional Analysis was initiated: the time of Universality, in this case scientific agriculture would break down the path of agricultural technology transfer models validated in other latitudes.

The Secretary of Industry, acknowledged the existence of various problems in the agriculture of Valle del Cauca; to solve them not only required a favorable regulations and political will, but budgetary availability, which had not been favorable, to which must be added the ignorance of the tropical context; however, he will not give up in their perseverance. In this regard, Patiño (1972, p. 148) stated that for Duran Castro the agricultural industries had reached the prostration, he considered so serious the situation on his return from abroad and he did not considered himself able to assume alone the responsibility of guiding production, and proposed that a mission of experts in agricultural, economic and social problems was brought.

Ciro Molina appreciated that Carlos E. Chardon from Cornell University and his coworkers were called to initiate the economic agricultural reform "required by the agriculture of Valle del Cauca", mission that was requested by the Governor of Valle, Carlos Holguín Lloreña (Molina, 1972, p. 252).

To start the experimental transfer of the North American agriculture, by management of Ciro Molina, the land of the Agricultural Farm of Palmira were bought; Durán Castro exposed that after visiting several farms the purchase had been perfected: "(...) the purchase by tittle deed No. 253 of December 21, 1928, entitled by the Notary Third of Cali, in a plot of the "Santa Bárbara" farm, property of Mr. Francisco Rivera E. The area of the plot is 417 "plazas" (2 acres) plus one thousand three hundred fifteen meters square".

Under that context Molina stated:

The farm will be the center for dissemination of the agricultural education and will be installed by the Chardon mission. The central government will contribute with 100,000 pesos from which 33,332 had been received already and, the Department destined 100,000 pesos from the current loan. With this money the program that Professor Chardon will leave is ensured to be done (Molina, 1929, p 182).

The 20s were finishing, scientific agriculture did not start in the territory of Valle del Cauca. The Agricultural Station of Palmira, was deeded the December 21, 1928, and inaugurated on January 1, 1929. Finally, the agricultural farm was instituted as an institution of departmental character, based on Law 41 of 1926 and Act 74 of 1926, related to the development of agriculture (Molina, 1929, pp. 256-257).

As a result of the effort made, the Government of Valle del Cauca had hired the Agricultural Mission of Puerto Rico, for the "Agricultural Recognition of Valle del Cauca" that was much craved. The director Carlos E. Chardon (1929), had arrived in Buenaventura, on May 8, 1929. Chardon (1929) instituted the experimental transferring of American agriculture as a priority feature of the Agricultural Experimental Farm of Valle del Cauca, and suppressed indigenous agricultural research in the Valle del Cauca tropics, which was justified as proposed in his final report, by delivering

the research addressing to the "Tropical Plant Research Foundation".

Chardon (1929), instituted the first moment for Institutional Analysis: the Universality. Addressing will continue its course, the United States would grant agricultural technology and the Ministry of Industries would incorporate it by technology transfer, which could start agricultural technological dependence; the above had a justification for the secretary of industries: scientific agriculture could be started in the department.

In the political context of the country conservatism lost the elections, and a liberal Enrique Olaya Herrera (1930-1934), assumed the Presidency of the Republic. By 1930, the Governor of Valle del Cauca, Salvador Iglesias, abolished the Secretariat for Industries (Decree 342 of August 27, 1930); ended the management of Ciro Molina Garcés. In practice, the management of the Secretary of Industries of Valle was limited, however, managed to materialize the Agricultural Experiment Station of Palmira, but without sufficient budget availability, could not guarantee success.

The vision of the ideal agricultural progress of Molina (which management was between October 18, 1926 and August 27, 1930), associated to technology transfer by introduction of animal and plant species breed in other latitudes, will rely on other administrations.

In recapitulation, the instituting forces that tried to start construction of the ideal of agricultural progress through indigenous research of tropical agriculture, after the creation of the Department of Valle, during the period 1910-1930, were frustrated in their ideals.

The first thirty years of the 20th century had passed and the dream of agricultural progress was not built in the Department. Molina had been acting coherently: good reputation, good regulations, enough financial resources and political will. His strategy faced multiple setbacks, since the interest in construction of public works prevented the realization of his dream, there was only left as institution the Agricultural Experimental Farm. But neither the regulations nor the institutions are the ones making changes, the power of the instituting human forces was required to beat the interests of individuals that had acted secretly.

By the Law 132 of 1931, the National Counsel of Agriculture was created, it promo-

ted, in cooperation with the Departments and municipalities: "(...) the scientific organization of research, experiment, demonstration, education, statistics and agricultural and livestock development services, under the National Government" (Article 14).

The Valle del Cauca senator Demetrio García Vásquez had envisioned that, with the approval of such Law, the possibility of establishing in the department an agricultural institute that with the support of the National Government, will allow the start of agricultural education and agricultural research for the hot tropics in the Agricultural Station of Palmira (Article 12). In this respect he exposed:

According to the Law 132 of 1931, in which preparation I was honored to intervene and defend it in the debates of the Senate of that year, it was authorized to the departments to fund Agricultural Institutes (...). With the necessary anticipation I have remitted to the President, several documents related with the development of the Farm of Palmira (...). I sustained a series of burning debates with the ex-ministry of Agriculture Mr. Francisco José Chaux, who was opposed till last minute to the approval of the cited project (...). The ex-ministry Chaux reached the extreme of announcing that he will ask or demand the president objection of the projected Law because he considered it unconstitutional (García, 1965).

Above the ministry observations, the National Executive sanctioned that law that turned over everything related to research, education, statistics and diffusion of agriculture (Law 132 of 1931. Article 2).

The new regulations allowed also to institute the higher education in agriculture in Valle del Cauca:

Higher education of agriculture will take place in the Agricultural College of Medellín, that is currently open, and in the agricultural colleges that will be opened in the Agricultural Station of Palmira and Picota, for that, the respective buildings will be constructed in the last two stations and will be provided of other elements that are lacking (Law 132 of 1931. Article 10).

And the article 18, included all the proposal oriented towards the construction of the ideal of agricultural progress:

The meeting in the same center, of a Station or Agricultural Farm, a College of Agriculture and the corresponding Agricultural Institute, will be noted as Agricultural Institute". The Government will proceed to complete as soon as possible, the agricultural institutes of Bogota, Medellín and Palmira.

The State was ready to share the investments with the agricultural institutes in the departments: "The expenses for founding and equipment and for functioning and support of the agricultural institutes will be split in halves between the Nation and the respective department" (Law 132 of 1931. Article 20).

The Secretary of Agriculture and Development of Valle del Cauca

The Secretary of Industries disappeared in 1993, and its functions were assumed by the General Secretary. Then, by the Ordinance 3, 1934 (March 21), the Secretary of Industries was reestablished: "(...) the last one with the name of Secretary of Agriculture and Commerce". Later, the secretary changed its name and, by the Decree 265, August 29, 1934, the medical doctor Demetrio García Vásquez was possessed again as the first Secretary of Agriculture and Development of Valle del Cauca. García, summed up the program to be developed as the instauration of: the College for Tropical Agriculture of Valle del Cauca (ESAT); the Agricultural Extension; the Zootechnics Services; the Poultry Farming Services; and the Irrigation and Penetration Roads.

The College for Tropical Agriculture of Valle del Cauca

The instauration of Agricultural Education in the department had been postponed for several years; the medical doctor and deputy to the assembly, Evaristo García, representing the instituting human forces, had defended its necessity. After his death, in June 16, 1921, his son Demetrio García Vásquez, followed that project, but with deeper interest; he wanted to set up also the college for agriculture. In that path, he will concentrate all his efforts during the decades of 1920-1940. It is important to recognize that the priority for the department administrations was the construction of land roads, considering that by that mean the agricultural progress would come by default.

García Vásquez, lacked of political power and had been unable to execute his educational

thinking:

It has been my dominant thinking over several years, founding a college for agronomy and veterinary in Valle del Cauca. I have considered that this Department joins the best conditions not only in our country but in South America, to establish a big Agronomy Institute will all its annex and derivations from the industrial technique (García, 1935, p. 4).

To study the agriculture at the tropical context, it was necessary to form professionals that precisely integrate the science with the agriculture, for such reason Demetrio García wanted to form professionals with scientific vocation:

The lack of preparation of specialized persons in the diverse sectors of the agricultural industry, imposes the installation of a center for studies in the formation of our scientific teams. As I have said several times, it is almost useless to start even a light prospect of agricultural techniques without counting initially with the capable elements to execute rationally (García, 1935, p. 4).

This allows to stress that Demetrio García, had another vision to establish scientific agriculture in the department, and initiated a break from the first moment of Institutional Analysis: the Universality, which was associated to technology transfer; it recalls that the guidelines had been drawn up by the Agricultural Mission of Puerto Rico.

Facing the directive lines instituted by Chardon in 1929, who pretended to imitate a foreign agricultural model that included the giveaway of agricultural research to the Department of Agriculture of the United States, García, using institutional pedagogy and a contra institutional principle to change the instituted structure, executed a transgression on the instituted thought, because he wanted to start the indigenous research for the Valle del Cauca context. This was the second moment of the Institutional Analysis: the Particularity. In that sense, the activities of teaching, research and extension of the ESAT were oriented towards the use of agricultural sciences in the tropical context.

García Vásquez, the intended to train professionals to improve agricultural production in the tropical context the Department of Valle del Cauca, apparently there was an influence of the educational reform proposed by Dewey (1916),

who in his book *Democracy and Education* stated that every concept and practice of education should change radically, supporting that all education should be scientific, and therefore the school should be a social laboratory where the received tradition should be exposed to pragmatic testing of truth: the school should develop the necessary competence to solve current problems and test future plans of action consistent with the experimental method. Dewey, conceived the school as a laboratory and the learning as experimentation and search of the unknown, not as a passive absorption of external "facts" (Bowen and Habson, 1986, pp. 167, 169).

García Vásquez recognized the need for education in levels: technical, professional and scientific, noting that scientific training was the support for technical and vocational training. This was ratified when he consulted the educational system in various countries, including Brazil, France and England, leaning by the French agricultural education system, where scientific farming was born around 1850; this educational method had been adopted by the school Viçosa in Brazil.

As it was known the agriculture in Valle del Cauca was prostrated, but animals and plants that were immune to several tropical diseases had been detected, which was added to the empiric selection of "Caucano" bovines, later registered as "Harton del Valle", which had an optimal production in the Valle del Cauca context, and that could be the start for research. Some situations described by Chardon in 1929 stimulated the beginning of research. Some examples to be cited are:

Among the indigenous bovine breed that are populating this country, all descendants from the first Iberian specimens brought by the Spanish conquerors, one of the, relatively, best is the one existing in Valle del Cauca, which is due largely to the ferocity of the soil, that allows abundant food, reaching an appreciable development and conformation, that is several cases reached an elite type (Chardon, 1929, p. 42).

As for agriculture but, referring to sugarcane he explained:

From the plant pathology point of view or from the science of diseases in plants, the deadlock existing in agricultural development of this rich region have been benefi-

cial. The geographical isolation has been so large, that sugarcane, that in other countries is attacked by several and dangerous diseases, is practically unscathed (...). Today, when the Department of Valle del Cauca starts the steps towards the development of its agriculture, there are no plant pathogen problems of importance for the sugar industry (Chardon, 1929, p. 306).

Appointment of the first Director and the Board of the College of Tropical Agriculture of Valle del Cauca, ESAT

García Vásquez, through the Consul of Colombia in Barcelona (Spain), contacted Professor Ignacio Vidal y Guitart, who subsequently would act as Director of the ESAT. By Office 373, June 26, 1934, led by the Consul to the Secretariat of Agriculture and Development the following was referenced: "Don Ignacio Vidal y Guitart is a young teacher of magnificent background and high professional competence, and currently plays here two official positions as Professor at the University of Barcelona and the Institute School" (García, 1935, p. 5).

In 1934, the Board of Directors of the ESAT was formed:

Demetrio García Vásquez (President). Secretary of Agriculture and Development. Medical doctor from the Universidad Nacional de Colombia and the Colonial Institute of the University of Paris. Professor of Botany and Zoology of the School Santa Librada.

Ignacio Vidal y Guitart (Director). Professor of Physics and Chemistry of the Universidad Autónoma de Barcelona.

Mario de Caicedo L (Professor of Tropical Hygiene). Medical doctor from the Universidad Nacional de Colombia.

Néstor Obando (Professor). Agronomist Engineer. Chief of the Agricultural Extension Services of the Department. Graduated from the College of Agriculture and Mechanical Arts of the University of Puerto Rico.

Pedro Emilio Gil (Secretary of Public Instruction). (Vidal, 1935, p. 4).

In October, 1934 the works to open the ESAT started. Several meetings took place in the Secretariat of Agriculture and, the requirements for entering and the curriculum of the first year were approved (Vidal, 1935, p. 3). The

first year of study was approved by the Decree 262, 1934 (August 25).

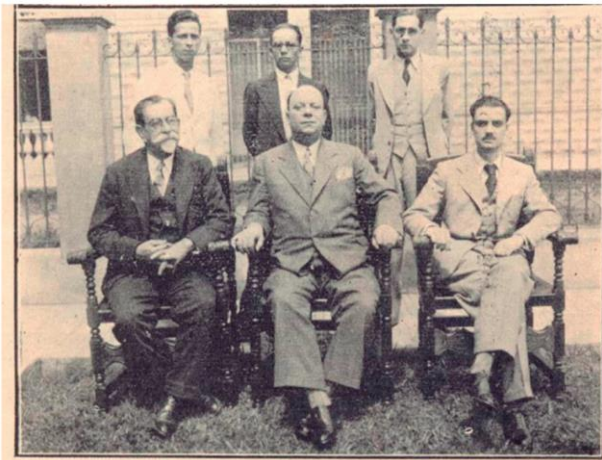
In the first meeting, the Board of Directories approved the normativity of the enrollment, school calendar, exams and curriculum. And as director: "to establish practical works in all the subjects" (Vidal, 1935, p. 4). This highlights the effort to preserve the praxis and theory as a unit. At the ESAT was proposed the study of the unknown tropical agriculture for the Valle del Cauca context and, that the new knowledge reached the students by practical works, it was pretended that the students were involved in that formative process.

The ESAT Director, Ignacio Vidal, highlighted the institutional leadership of García Vásquez: "Immediately took place the first meeting of the Board of Directors that unanimously agreed with all the dispositions taken by the Secretary of Agriculture because of the lack of time in October" (Vidal, 1935, p 4).

Inauguration of the College of Tropical Agriculture of Valle del Cauca, ESAT in Cali (November 5, 1934)

Demetrio García, supported by the Law 132 of 1931, inaugurated the ESAT in Cali and the Service for Agricultural Extension in November 5, 1934, achieving the constitution of the Agricultural institute of Valle del Cauca having in mind the existence of the Agricultural Research Station of Palmira. The founder Professors were led by the Secretary of Agriculture: Demetrio García Vásquez (Figure 1). The first group of students was composed by seven students (Figure 2). The practical labors were developed at different farms: "(...) that with their respective services of zootechnics, veterinary, poultry, etc., are founded for promotion and propagation of tropical multicrops, that under the insuperable soil fertility of Valle del Cauca soils, will serve as centers for technical and experimental studies for all the country" (College for Tropical Agriculture (1935), Prospect. p. 3). A delegate committee developed the curriculum with a duration of four years. About this Ignacio Vidal explained:

It was the rule that presided over the preparation of the previous curriculum, to give in the first two years, that most important knowledge in agricultural sciences, investing the last two years in specialized courses, so they come to be monographs on various issues of vital interest to the



Grupo de profesores del primer año presididos por el Sr. Secretario de Agricultura. De izquierda a derecha, sentados: Dr. Mario de Caicedo L., Dr. Demetrio García Vásquez, Sr. I. Vidal Guitart; en pie: Señores Manuel de J. Lenis, Jaime Villegas y Belisario Losada S.

Figure 1. The founders Professors of the ESAT of Valle del Cauca. From left to right: sitted down, Mario de Caicedo, Demetrio García and Ignacio Vidal; standing up, Manuel de J. Lenis, Jaime Villegas and Belisario Lozada. Photograph taken from: García V, D (1935). College of Tropical Agriculture. Prospect. Editorial América, 12p. Departamento of Valle, Colombia.

Valle. It has taken into account the practical character given to teaching school. To this end, regularly student trips have been organized accompanied by one of the teachers to Palmira farm and other experimental farms, therefore they get familiar with what will be their normal work (Vidal, 1935, p. 6).

The foundation of the ESAT, coincided with the President Alfonso Lopez Pumarejo (1934-1938). The first director of the ESAT continued its emphasis on practical work, which was intended to break the encyclopedic educational vision and scholasticism:

Exercises for exam in the second semester will take place in early August and then give students a practical course of a month and a half on the grounds of the Palmira farm, in the spirit presiding over the curriculum, and it is, what we note once again, give to all the work a practical nature (Vidal, 1935, p.7).

This created the right time to start the third time of institutional analysis environment, the Singularity: Integration of Science to Agriculture through continuous generation of indigenous knowledge on tropical agriculture and its transposition to the agricultural educational context of Valle del Cauca.

The Law 132 of 1931 made viable the insti-



Grupo de alumnos del primer año; de izquierda a derecha: Oscar Velásquez, Oscar Arana, Adalberto Figueroa, Luis Morcillo, Herberto Aguado, Reinaldo Miller y Luis Vallecilla.

Figure 2. First group of student of the ESAT Valle del Cauca. From left to right: Oscar Velásquez, Oscar Arana, Adalberto Figueroa Potes, Luís Eduardo Morcillo, Herberto Aguado, Reinaldo Miller and Luís Vallecilla. Photograph taken from: García V, D (1935). College of Tropical Agriculture. Prospect. Editorial América, p 9. Departamento del Valle, Colombia.

tuting human forces led by García Vásquez to institute the ESAT del Valle del Cauca, and the Department Agricultural Extension Service. García had intended to join the ESAT, the Agricultural Extension and the farms, forming in 1934 the so-called Agricultural Institute of Valle del Cauca, with the use of national resources. The regulations guarantee the co-financing of 50% of resources, with that he will establish agricultural research in the neotropical context.

The Department Agricultural Extension Services had considered the founding of agricultural farms-schools according to the vocation of the land. The agronomist engineer Nestor Obando (1935, p.9) was the first chief of the agricultural service extension of the department, he mentioned that such service functioned from the month of July, 1934 in agreement with the Ordinance 11 of the Department Assembly of 1934 and, the farmers were getting support from the technicians and the small agricultural centers established by the department; this was led by the chief of the service, three agronomist and the secretary of the "Agricultural Journal" as organ of service for the extension (Obando, 1935, p.9). The service had four farms for demonstration acquired with department and municipality funding (Obando, 1935, p. 10).

The Service of Agricultural Extension would

be formed by the Experimental Extension Station of Palmira, and the agricultural centers recently funded in some municipalities for that end: Palmira (Rozo), Candelaria (el Tiple), Andalucía and Roldanillo.

The instituting human forces, that had founded the Agricultural Institute of Valle del Cauca, and that by law would be formed by the College for Tropical Agriculture, ESAT; the Department of Agricultural Extension Services and an Experimental Agricultural farm, in this case the one in Palmira, started the third moment of the institutional Analysis: the Singularity, its role would be to strengthen and conserved the institution. In that context, the academic activities of the institute (Teaching, Research and Extension) would be oriented towards the permanent generation of indigenous knowledge on tropical agriculture.

But its mission had not finished there, by dialectic had the historical function to continue as instituting forces, establishing scientific agriculture in the Valle del Cauca, in the agricultural progress, inclusive of rural communities.

Within the Agricultural Extension Service, it had been created the Section of Experimental Agronomy, Agricultural Experimental Farm in Palmira. The section chief, led by agronomist Jaime Villegas Duque, who also worked as a Professor at the ESAT, presented to the Secretary of Agriculture and Development, its first report in May 9, 1935. For Villegas (1935, p. 79), the main objective of the Section of Agriculture, was to investigate scientific problems crop of Valle del Cauca. And he had taken the initiative to establish direct contact with farmers of Valle del Cauca to know the problems of the various crops, before initiating the investigation (Villegas 1935, p. 79).

Professor Villegas, representing the instituting human forces that had the role to contribute in the instauration of scientific agriculture, including the rural communities of Valle del Cauca, was searching for a tropical crop system for the small farmer; in such direction the existing alternative was to work with domesticated plant species used by pre-Columbian communities, researching and recovering their ancestral knowledge and, similarly, research on the species diversity of human and/or commercial interest that are produced in the wild. Villegas envisioning the social inclusion of the rural communities: farmers, afro Colombians and indigenous people,

disserted that communities with less than ten plaza of land, needed to maximize production to live comfortably and, exposed its proposal for the tropical Valle del Cauca: "To complete this goal, the Section of Agronomy proceed to do experiments with intercropping. By this name is understand the association of two or more plants in the same land" (Villegas 1935, p. 80).

His proposal on intercropping was not new for Valle del Cauca, to the opposite, it had been an ancestral activity developed by the pre-Columbian indigenous communities which cultural knowledge were diluted in the time, the application of such technology had been observed by European chroniclers like Pedro Cieza de León, who walked the current Valle del Cauca territory in 195: "The Valle is very plain, and it is always sowed of several corn and cassava crops and, has large fruit tree lands" (Cieza de León, 1962, p. 81).

For Professor Villegas, the recovery of such knowledge implied, additionally, the integration of science with agriculture. For that, it was fundamental to analyze the ancestral activities of this kind, when applying to the agriculture the existing scientific knowledge to explain their rational behind productivity. As advantages of the intercropping, Villegas (1935, p. 80) explained: *Economy of soil*, because while one crop occupies the land, the other space is used with another plant that produces fruit during the time that the place is empty; *Economy of the labors*, because the removal of weeds are used for both crops; *Breeding of soil*, when intercropping crops with legumes that fixed atmospheric nitrogen in the soil; *Higher gains per unit of area*, due to the diversified productive intensity.

The above allowed the starting of research on tropical agriculture in the context of Valle del Cauca, mimicking a natural system: the "neotropical Colombian forest", characterized by the interrelation of diverse species that make possible the productive diversity. In relation to the experiments performed by intercropping, Villegas mentioned cassava associated with common bean; as comparative result he explained that cassava had no effect on common bean production when growing as monocrop: "(...) it gave an average of fifty arroba per plaza that is more or less the same average of production in the same unit of land for common bean alone in land of the Farm" (Villegas 1935, pp. 80-81). And he continued giving details of the experiments, in this case for cassava crop

associated to corn and common bean:

In this experiment we used one and a half “plazas” of land sowing in the following way: cassava was sown at a rate of 1.50 meters in rows and one meter between plants. Between the cassava rows corn and common bean was sown (...). It is convenient to sow the common bean eight or fifteen days before cassava and corn is sown. (...). This experiment this experiment gave us one hundred fourteen arrobas of corn per plaza and thirty three arroba of common bean in the same unit. Cassava production is not here because its harvesting has not been done yet.

Observations: Corn production slightly reduced its production average when is alone, which is around one hundred thirty arroba per plaza here at the Farm. Common bean production was reduced in forty percent in its average when grown alone. Cassava suffered little. Therefore, it is proven in this experiment that with intercropping in this way it is increased in more than hundred percent the productivity potential of a soil.

We also assayed common bean intercropped with sugarcane and cotton (...). We keep on making observations and experiments to see which conclusions are obtained to benefit the small farmer (Villegas 1935, pp. 80-81).

The comparative results of the experiments, can be better observed by comparing the initial production in arroba of corn in a plaza of land; in front to the production in arroba of the intercropped crop (corn, cassava and common bean) in a plaza of land (Table 1):

Table 1. Validation of the tropical agriculture (intercropping), done by the southamerican indigenous communities from ancestral times, compared to monocrops.

Crop	Production in monoculture	Production in intercropping
Corn	130	114
Cassava	0	Not harvested yet
Common Bean	0	33

Adapted from: Villegas D. J. (1935). Informe del Jefe de la Sección de Agronomía Experimental, de la Estación Experimental Agrícola de Palmira, al Secretario de Agricultura y Fomento del Valle del Cauca. In: Anexos de Informe del Secretario de Agricultura y Fomento a la Asamblea Departamental en sus sesiones ordinarias de 1935, Cali. Departmental press.

It is important to note the productive rationale of the intercropped crops, in these first

experiments in the context of tropical agriculture, where comparatively higher results were quantified in comparison to the monocrop.

Before the first experiment, the production of corn in monocrop was estimated, the estimated average was 130 arroba per plaza; however, when sown in intercrop with cassava and common bean, the harvest was 114 arroba of corn (16 arroba less), but the deficit was compensated with an additional harvest of 33 arroba of common bean and all the cassava production that could not be quantified in the same area of land. But that was not all, because with a vision of future it was possible to do an intensive production mimicking the diversity of the tropical forest: less weed removal, input reduction (because the legumes fix atmospheric nitrogen) and, more earning per unit of area.

In Valle del Cauca, from ancestral times, the extractive agriculture removed nutrients from the soil; Professor Villegas wanted to contribute in the restitution of such nutrients. In relation to the fertilizers production they were evaluating the green amendments:

Studies on green amendments are carried over with the following plants: Crotalaria striata, Crotalaria juncea, velvet bean (Stizolobion deeringianum), coupea (Vigna unguiculata). We believe that the best ones for areas where permanent crops will be sow are the coupea and crotalaria. The velvet bean can be used in places were no permanent crops are going to be sown because it becomes a weed. We have not done yet the tons per plaza neither the chemical composition of the fertilizers above mentioned (Villegas 1935, p. 90).

The above indicates a productivity rationale that is friendly with the environment, that when widespread could transform the agriculture in Valle del Cauca. Similarly, Professor Villegas representing the instituting human forces, validated the productivity rationale of an ancestral practice of the pre-Hispanic indigenous communities: the intercropped crops; and he contributed to materialize the dream of the maximum representative of the instituting human forces, Demetrio García Vásquez, taking the science to the agriculture in the tropical context of Valle del Cauca. As Villegas was researching and validating the tropical agriculture, he sowed the seed of knowledge by the unit theory-practice in the students of the ESAT, who, as future professionals, will repre-

sent the new instituting forces that will take the science to agriculture in the neotropical context. It is to highlight that Jaime Villegas was part of the founders Professors of the ESAT and, therefore, those experiments were part of the teaching-learning process in the College, by the agronomy slogan: Teach who to do by doing it.

The academic approach that was giving the social recognition to the institution consisted in the fact that research, academy and extension were integrated as an inseparable unit.

The social impact of the Agricultural Institute of Valle del Cauca was quantified from their beginnings; as example it is cited the distribution of seeds generated at the Agricultural Station of Palmira from July 1, 1934 till April 30, 1935. In that period, the agricultural station handed outside the Department of Valle del Cauca and for free 9,914 sacks of seeds in 21 departments of Colombia and, moreover sent abroad several seeds demanded by countries such as Cuba, Russia and Brazil. The distributed seeds correspond to: common bean, 6 varieties; grasses, 6 varieties; soy bean, 6 varieties; cane, 6 varieties; tobacco, 5 varieties; cotton, 2 varieties; trees (fruits, flowers, cacao and palms), 4 varieties; rice, 3 varieties; legumes Cow peas, 4 varieties; forage legumes, 4 varieties, and some varieties of corn, canamo and other legumes (García, 1935, p. 40).

By 1939, according to the journal "Relator" of Cali (February 22) for the next day the first student of the ESAT will be graduated, which represented for Valle del Cauca the materialization of a dream: to form professionals that will continue to integrate the science with tropical agriculture, the local press of Cali highlighted:

"The day of tomorrow has been definitely fixed at eight in the night to celebrate the act of option for the degree in Agronomical Engineering of the student mister Adalberto Figueroa Potes, outstanding student of the College of Tropical Agriculture of Valle. The act will be verified with the solemnity required for the case, with the assistance of the Governor of the Department, Doctor Demetrio García Vásquez and his secretary of dispatch and outstanding scientific and social personalities invited specially by the Government and the College. As president of thesis will act the entomologist Doctor Belisario Losada Sinisterra and as members of the Jury the doctors Mario de Caicedo, director of the College and the

agronomist professionals doctors Jaime Villegas Duque, Manuel J. Rivero and Aicardo Orozco. The thesis chose by Mr. Figueroa Potes is entitled "STUDY OF A MICROLEPIDOPTERA OF ECONOMICAL IMPORTANCE FOR VALLE (Gnori-moschema lycopersicella "BUSK") and represents one of the most interesting and original studies that have been done in the Department and in the country on this important branch of the agricultural industry. In such study he has put his conscious an persistent observations captured in different farms and sectors of the Department and of Colombia, which will contribute to enrich with knowledge and efficient applications the scientific libraries and the national agriculture" (Journal "Relator" Cali, February 22, 1939).

And in the first page of the journal "Relator" of Cali in February 24, 1939, was read with pride: "BRILLIANTLY, IT WAS GRADUATED ADALBERTO FIGUEROA YESTERDAY". The ESAT of Valle graduated in Cali the first academic, who presented a scientific thesis to generate important knowledge on an insect that was affecting tropical crop: the Tomato. Such Undergraduate Thesis allows to confirm that the first graduated from ESAT widen the knowledge frontiers associated with the Colombian neotropics, the knowledge obtained reached the ESAT classrooms in a continuous present, then the agronomist of the Agricultural Extension Service, into the Agricultural Institute of Valle del Cauca will continue taking the science into the tropical agriculture. In summary, the ESAT will continue forming the professionals, researchers and scientists for the agriculture in Valle del Cauca, the Agricultural Institute of Valle del Cauca will extend its research in the context of the Neotropical of Valle del Cauca.

Under that context, in May, 1943, one of the representatives of the instituting human forces subscribed to the ESAT, Ignacio Vidal y Guitart, presented his OBRA "Manual of Agricultural Chemistry" (Figure 3), which was the first book published in 1944 by the College. The Professor Vidal y Guitart kept stimulating the process to integrate science into tropical agriculture (Vidal, 1944. Manual de Química Agrícola. Escuela Superior de Agricultura Tropical. 1944. Published by the Secretariat of Agriculture and Development. 222 p).

With the information provided by the Secre-

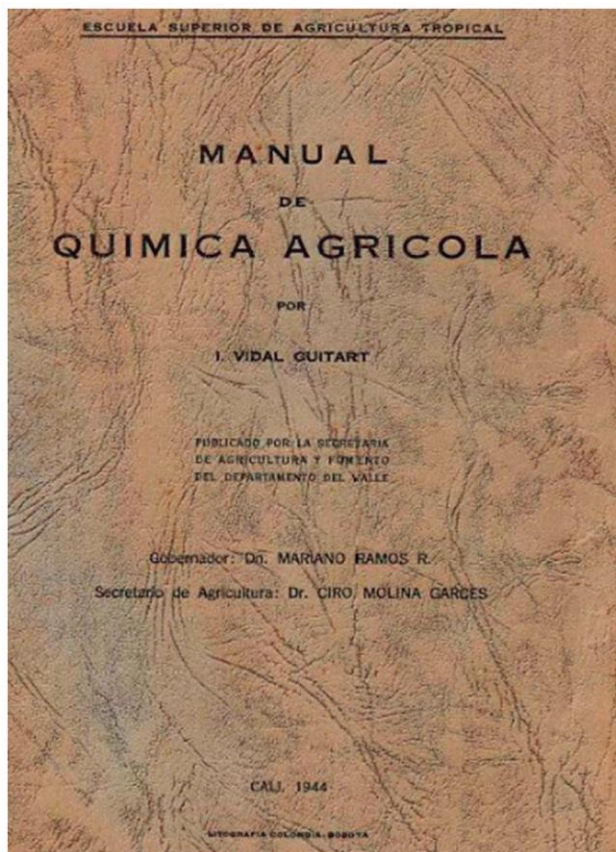


Figure 3. First book published by the ESAT Valle del Cauca. Photograph taken from: Vidal, 1944. Manual de Química Agrícola. Escuela Superior de Agricultura Tropical (1944). Published by the Secretariat of Agriculture and Development. 222 p.

ariat of Agriculture and Development associated to the Agricultural and Livestock census of 1934-1938, done in 34,848 properties in 36 municipalities of the Department, census that was led by the secretaries of Buenaventura (1939) and Abondano (1942) (Table 2), it is to highlight that sugarcane, corn and coffee were the activities using most of the land incorporated to agriculture.

It is to note that wheat was the crop with largest percentage growth (283.833%) after sugarcane, and in the third place was the potato crop, indicating the effort of the Agricultural Institute of Valle del Cauca because of the increase in agricultural crops at the cold regions. Cotton and cacao crops showed a percentage growth that was negative, because they demanded more scientific knowledge for control of tropical diseases.

In 1941, the largest agricultural activity in expansion was sugarcane, with an increase of 33.36%; corn had become a commercial crop. Coffee was following its extension by the rural

communities at the mountain slopes of the Department. For the 9 crops compared, 63.664 plazas of land had been converted into agricultural activities; this means that the traditional bovine livestock that was extensive and extractive was losing land and was experimenting a process of productive transformation oriented towards intensification; in cold lands the bovine livestock was gaining land, the pig breeding was losing market, probably for the similar production in other departments or because of importation of byproducts such as butter, as for the production of horses, donkeys and mules it was negatively affected by the incorporation of motorized plow.

The production is shown in quintals for the main agricultural products exceeding in Valle del Cauca during 1941 (Table 3). As explained, sugarcane, coffee, rice and corn, could increase their productive land in the Department, leaving food exceeds for other departments in the country and for exports, as happened with coffee.

Wheat cultivation, despite increasing the cultivated area (Table 2), could not satisfy the internal consumption of Valle del Cauca and it was necessary to import it (Table 3). Cacao cultivation, despite of having a negative comparative increase, it means, it had reduced the sowed area (Table 2); it generated in Valle del Cauca production excess for other departments in Colombia (Table 3).

Cotton cultivation was the most critical, because it had a negative comparative increase, reducing its planting area (Table 2) and should be imported, because it could not generate productive surpluses for the Valle del Cauca (Table 3).

In summary, as institutional social impact, the scientific agriculture disrupted the agriculture in Valle del Cauca, satisfying the internal demand of the main food and generating productive surpluses for other departments of Colombia, or for exportation, helping in producing currency for the country (Table 3).

In the case of Valle del Cauca, during that period it was established the scientific agriculture that, by studying various tropical species, allowed to contribute to the promotion of the agricultural sector, stimulating demand for professionals for the industrial progress of the department.

By 1943, as Secretary of Agriculture and Development was Ciro Molina Garcés and, in

Table 2. Comparative increase in the land use in the Department of Valle del Cauca for the period between 1934-1938 versus 1941.

Activity	Land areas cropped		Comparative increase		
	1934-1938	1941	In areas per activity	In % per activity	In % of the total of areas
	N° of areas	N° of areas			
Sugarcane	24,698	45,935	21,237	85.99	33.36
Corn	30,768	46,045	15,277	49.65	24.00
Coffee	86,986	98,619	11,633	13.37	18.27
Wheat	3	7,018	7,015	233,833.33	11.02
Plantain	19,906	26,243	6,337	31.83	9.95
Rice	11,904	13,988	2,084	17.51	3.27
Potato	1,548	2,626	1,078	69.64	1.69
Cotton	392	277	-115	-41.52	-0.18
Cacao	9,426	8,544	-882	-10.32	-1.39
Total	185,631	249,295	63,664	34.30	100.00

Species	Number of Animals		Comparative increase by species	
	1934-1938	1941	In number of animals	In %
	Number	Number		
Bovinos	564,549	621,540	56,991	10.09
Ovino	6,955	7,450	495	7.12
Caprino	5,308	5,308	0	0.00
Asnal	1,316	1,316	0	0.00
Porcinos	63,187	58,725	-4,462	-7.60
Mular	23,684	21,144	-2,540	-12.01
Equinos	201,858	93,211	-108,647	-116.56

Adapted from: Buenaventura (1939), Agricultural and livestock census 1934-1938. And Abondano (1942). Statistics for agricultural production, from the year 1941. In: Anexos de Informe del Secretario de Agricultura y Fomento al Gobernador y a la Asamblea Departamental en sus sesiones ordinarias de 1939 y 1942, Cali. Departmental press.

Table 3. Productivity and excess of the main agricultural crops (in quintals) in the Department of Valle del Cauca during 1941 (1 quintal equals 50 kg).

Product	Sugar	Coffee	Rice	Corn	Cacao	Panela	Cotton	Wheat
Production in Valle	831,018	739,642	839,280	2,302,250	82,640	552,480	3,462	210,540
Imports from abroad to Valle	5,000						19,264	74,764
Consumption in Valle	140,838	157,982	675,216	2,205,070	31,820	502,720	9,866	274,324
Dispatch to the country	695,180	30,000	164,064	97,180	50,820	49,760	12,860	10,980
Exports		551,660						
Availability	0	0	0	0	0	0	0	0
Excess after production and internal consumption	690,180	581,660	164,064	97,180	0,820	49,760	6,404	-63,784
% of excess	83.05	78.64	19.55	4.22	61.50	9.01	-184.98	-30.30

Adapted from: Abondano (1942), Estadística de consumo, de algunos de los artículos que movilizan la economía del Valle - 1941. In: Anexos de Informe del Secretario de Agricultura y Fomento al Gobernador y a la Asamblea Departamental en sus sesiones ordinarias de 1942, Cali. Departmental press.

his report to the Governor of Valle in 1944, he considered of great convenience, transcribing some aspects of agricultural and industrial economy of the department, which forced to recognize the achievements of the masterminds of agricultural progress of the department. In this regard he reported information on agricultural production in the Valle del Cauca and its contribution to the overall economy in 1943, highlighting some products that were leading

productivity in order: Sugar and panela; coffee; corn, bananas, beans; slaughtered cattle and pigs; soaps, textiles and medicines; beers and soft drinks; raw and manufactured snuff; milk, cheese, butter and furs, etc. (Molina, 1944, p. 288).

Individually the production value of derivatives of sugarcane and coffee crops had definitely shifted away the production of beef. Valle del Cauca was primarily agricultural with about

62% of the value of total production, livestock activities accounted for just over 13% and activities related to industry accounted for about 25%.

The same information was reported in 1944 by Hernando Caicedo, who mentioned that the Governor of the Department in his New Year's message stated that: "The Valle del Cauca is essentially agricultural", by providing information on what produced the region to the general economy in 1943 (Table 4).

Table 4. Economic input of the agricultural, livestock and agro industrial productivity to the Department of Valle del Cauca in 1943.

Production	Value in Pesos	% of total
Sugar and panela	22,000,000	20.47
Coffee	17,000,000	15.81
Corn, plantain and common bean	13,000,000	12.09
Slaughtered cattle and pigs	10,000,000	9.30
Raw and manufactured tobacco	7,000,000	6.51
Milk, cheese, butter and fur	4,000,000	3.72
Cacao, wheatm fruits and birds	3,000,000	2.79
Rice	3,500,000	3.26
Soap, textiles and medicines	8,500,000	7.91
Beer and refreshing drinks	8,000,000	7.44
Shoes, clothes and other manufactures	4,500,000	4.19
Cement and pottery	3,000,000	2.79
Wood and joinery	1,500,000	1.40
Leather, rubber, printing and various	2,500,000	2.33
Total	107,500,000	100.00

Adapted from: Caicedo, 1965, Ensayos económicos y sociales. Editorial Norma, Cali, p. 230. ("Revista Agrícola y Ganadera", February, 1944).

To ensure that the ESAT of Valle del Cauca stayed alive, it is to note that in 1942, Ciro Molina Garcés, the instituting forces are transformed, materializing another dream, to move the institution to Palmira according to the Law 132 of 1931. For such, by public document of the Notary Second of Palmira, signed by Ciro Molina Garcés representing the department, several plots were bought by \$12,500 pesos that were around 26 plazas (Notary Second of Palmira, 1944. Deed 113. February 7).

With the above, teaching jobs (in the new campus located in Palmira) and experimentation (in the Experimental Agricultural Station of Palmira) will be better coordinated, with claims of their reunification as a unique center, which had become a technical imperative for such kind of institutions (Molina, 1944, pp. 311-312). Such reunification continues postponed until the present moment.

Conclusions

When comparing the laws for agricultural development: Law 74, 1926 and Law 132 of 1931, the second one was the one that facilitated in a positive manner the genesis and establishment of scientific agriculture in Valle del Cauca, because it allowed the pioneers of agricultural sciences to initiate an Agricultural institute in 1934.

The Law 132 of 1931 allowed the instituting human forces of the scientific agriculture to found in 1934 the Agricultural Institute of Valle del Cauca and the College for Tropical Agriculture of Valle del Cauca, ESAT, starting the genesis and establishment of scientific agriculture in Valle del Cauca.

References

- Abondano H, A. (1942) Informe del Secretario de Agricultura y Fomento al Gobernador del Valle del Cauca. En *Anexos de Informe del Secretario de Agricultura y Fomento al Gobernador y a la Asamblea Departamental en sus sesiones ordinarias de 1942*, Cali. Departmental Press.
- Asamblea Departamental del Valle del Cauca (1913). Ordenanza 28, Abril 10. Sobre fundación de una Escuela Normal de Agricultura Tropical y Veterinaria.
- Asamblea Departamental del Valle del Cauca (1926). Ordenanza 21. Por la cual se establece la Secretaría de Industrias.
- Bejarano A, J.A (1987). *Ensayos de historia agraria colombiana*. Fondo editorial CEREC. Bogotá, pp. 91, 169,170, 171, 172, 174, 176, 182, 184, 189.
- Bowen J. & Habson P. R. (1986). *Manual del Maestro. Teorías de la Educación. Innovaciones importantes en el pensamiento occidental*. First part. University of New England, Australia. Ediciones Ciencia y Técnica, S.A. Mexico. ISBN 968-18-2126-2 Vol. I.
- Buenaventura, M. (1939) Informe del Secretario de Agricultura y Fomento a la Asamblea Departamental en sus sesiones ordinarias. In: *Anexos de Informe del Secretario de Agricultura y Fomento al Gobernador y a la Asamblea Departamental en sus sesiones ordinarias de 1939*, Cali. Departmental Press.
- Chardon, C. E. (1929). *Reconocimiento Agro-Pecuario del Valle del Cauca*. San Juan de Puerto Rico. Informe emitido por la Misión Agrícola Puertorriqueña, dirigida por el Hon. Carlos E. Chardon y presentada al Gobernador del Departamento del Valle en Colombia 342 p.
- Cieza de León P. (1962). *La crónica del Perú*. Archivo y Biblioteca Nacionales de Bolivia. Retrieved from <http://200.87.17.235/bvic/Captura/upload/CroPe1.pdf>. [23.03.2009]

- Congreso de Colombia (1926). Ley 74, noviembre 30. Sobre el Fomento a la Agricultura y a la Inmigración y se dictan otras disposiciones. Diario Oficial número 20361.
- Congreso de Colombia (1931). Ley 132 (Diciembre 9), por la cual se crea el Consejo Nacional de Agricultura y se fomentan los servicios de investigación, enseñanza y divulgación agrícola. Diario Oficial número 21864.
- Dewey J (1916). *Democracy and Education*. Macmillan, New York.
- Escuela Superior de Agricultura Tropical (1935). Prospecto. Departamento del Valle, Colombia. Editorial América, 12p.
- García, E. (1994). *Escritos escogidos*. Gobernación del Valle del Cauca. Gerencia para el desarrollo cultural. Fundación Evaristo García.
- Lourau, R. (1975). *El análisis institucional*. Buenos Aires: Amorrortu, B.A editores.
- Molina G, C. (1927, 1928, 1929, 1930). *Informe que el Secretario de Industrias rinde al señor Gobernador del Departamento del Valle sobre la marcha del ramo a su cargo*, Cali. Boletín Científico del Valle del Cauca. CESPEDESIA Vol. I Número 3. Cali, July, August-September.
- Molina G, C. (1943, 1944, 1945, 1946, 1947). *Informe que el Secretario de Agricultura y Fomento rinde al señor Gobernador del Departamento del Valle del Cauca*, Cali, Abril. Boletín Científico del Valle del Cauca. CESPEDESIA Vol. I Número 3. Cali, July, August-September.
- Obando, N. (1935). Informe del Jefe del Servicio de Extensión Agrícola del Departamento al Secretario de Agricultura y Fomento del Valle del Cauca. In: *Anexos del Informe del Secretario de Agricultura y Fomento a la Asamblea Departamental en sus sesiones ordinarias de 1935*, Cali. Departmental Press.
- Patiño, V. M. (1972). Boletín científico del Departamento del Valle del Cauca, *CESPEDESIA vol. I No 3* Cali.
- Patiño, V. M. (1972). *Esbozo biográfico de Ciro Molina Garcés*. Boletín científico del Departamento del Valle del Cauca, CESPEDESIA vol. I No 3 Cali.
- Periódico "El Relator" (1939). Cali, February 22.
- Periódico "El Relator" (1939). Cali, February 24.
- Vidal G, I (1935). Informe del Director de la ESAT, al Secretario de Agricultura y Fomento. In: *Anexos del Informe del Secretario de Agricultura y Fomento a la Asamblea Departamental en sus sesiones ordinarias de 1935*, Cali. Departmental Press.
- Vidal G,I. (1944). Manual de Química Agrícola. Escuela Superior de Agricultura Tropical. Published by the Secretariat of Agriculture and Development. 222 p.
- Villegas D. J. (1935). Informe del Jefe de la Sección de Agronomía Experimental, de la Estación Experimental Agrícola de Palmira, al Secretario de Agricultura y Fomento del Valle del Cauca. In: *Anexos de Informe del Secretario de Agricultura y Fomento a la Asamblea Departamental en sus sesiones ordinarias de 1935*, Cali. Departmental Press.