



North american immigrants of Santa Bárbara d'Oeste and Americana and the process of knowledge transmission analogous to that of non-formal technical education (1865-1915)

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ABSTRACT. This work analyzes the educational role of North Americans emigrated from the United States to Brazil shortly after their defeat in the secession war. The revision of primary and secondary historical sources confirmed the role of immigrants in the offering of non-formal agricultural education to the communities of the region of Americana and Santa Bárbara d'Oeste - SP, in the period 1865 to 1915. Two subjects were studied, in search of comprovação of the hypothesis presented, which states that the process of knowledge transmission, analogous to that of non-formal technical education, provided by the North Americans and their immediate descendants would have provoked educational effects on the communities affected.

Keywords: São Paulo state; confederate emigration; educational process; technical education.

Imigrantes norte-americanos de Santa Bárbara d'Oeste e Americana e o processo de transmissão de saberes análogo à educação técnica não formal (1865 – 1915)

RESUMO. Este trabalho analisa o papel educativo dos norte-americanos sulistas emigrados dos Estados Unidos para o Brasil logo após sua derrota na Guerra de Secessão. A revisão de fontes históricas primárias e secundárias puderam confirmar o papel dos imigrantes no oferecimento de educação não formal agrícola às comunidades da região de Americana e Santa Bárbara d'Oeste – SP, no período histórico de 1865 a 1915. Dois personagens foram estudados em busca de fatos comprobatórios da hipótese aqui apresentada, qual seja, a de que o processo de transmissão de saberes, análogo ao da educação não formal, provido pelos norte-americanos e seus descendentes imediatos teria provocado efeitos educativos e econômicos para as comunidades afetadas.

Palavras-chave: estado de São Paulo; emigração confederada; processo educativo; educação técnica.

Inmigrantes nord-americanos de Santa Barbara d'Oeste y Americana y el proceso de transmisión de conocimiento análogo a la educación técnica no formal (1865-1915)

RESUMEN. Este trabajo analiza el papel educativo de los nord-americanos sureños emigrados de los Estados Unidos a Brasil poco después de su derrota en la guerra de secesión. La revisión de fuentes históricas primarias y secundarias pudieron confirmar el papel de los inmigrantes en la oferta de educación agrícola no formal a las comunidades de la región de Americana y Santa Bárbara d'Oeste - SP, en el período 1865-1915. Dos personajes fueron estudiados de una manera más detallada, en busca de hechos comprobatórios de la hipótesis presentada aquí, que es que el proceso de transmisión de conocimiento, análogo al de educación no formal, proporcionada por los nord-americanos y sus descendientes inmediatos habría provocado efectos educativos para las comunidades afectadas.

Palabras clave: estado de São Paulo; emigración confederada; proceso educativo; educación técnica.

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Introduction

The North American immigration movement to Brazil, caused by the Civil War (1861-1865), was based on the search for opportunities at a critical historical moment, although it may also have been motivated by mythical and religious values of the so-called 'manifest destiny'¹, that many of the southern immigrants brought with them. The

¹ Doctrine by which it is advocated that the people of the United States were chosen by God to rule the world. See, among others, Oliveira (1985) and Teixeira (2010). However, Aguiar Acta Scientiarum. Education, v. 45, e55068, 2023

idyllic vision of the 'tropical paradise' of South America turned out to be harsher than imagined, given the weathering of the natural environment and the characteristics of society and politics found here.

The objective of this work is to examine the practices of transmission of technical knowledge, establishing a correlation with what was later identified by Gohn (2010) and Von Simson, Park and Fernandes (2001) as non-formal educational processes, provided by these North American immigrants, when they came to Brazil. In this sense, the terms 'non-formal technical education', 'non-formal agricultural education' and 'non-formal technical and agricultural education' utilized here mean practices of transmission of technical knowledge analogous to non-formal education.

We particularly sought to study, two subjects, representatives of the process, who were concerned with non-formal agricultural education in the communities of the region of Americana and Santa Bárbara d'Oeste, in the State of São Paulo, in the period from 1865 to 1915. The chronological cut of five decades coincides, initially, with the arrival of the agents of North American immigration societies, in Brazil and, finally, with the participation of Robert Lee Ferguson in the practices of transmission of technical knowledge at the Escola Agrícola Prática de Piracicaba².

The hypothesis examined here suggests the occurrence of educational and economic effects in communities and cities affected by the practices studied. The study is justified by the importance of understanding educational processes that occur in the surroundings of communities that are always desirous of opportunities to improve their lives, but which are not necessarily linked to official or formal education.

In order to study one of the possibilities of this immigration flow, related to non-formal education practices, any object or action that presents information about the researched past was assumed here as a historical source of the educational process. As proposed by Ruiz Berrio (1976), the historical method used was based on data collection conducted through oral sources (conversations, narratives and interviews with descendants), while data from primary documentary sources (produced by observers or direct participants of the facts) were collected based on private, family and institutional files: documents written in the form of narratives and chronicles, material sources (cemetery tombstones, personal belongings such as utensils, work tools, furniture, clothing) and iconographic sources (photographs). Secondary sources were used in their role of information provided, indirectly, by authors who were not witnesses of the event (Costa, Melo, & Fabiano, 2010).

The archives and public collections consulted were the Museu Prudente de Moraes and the Instituto Histórico e Geográfico (IHGP), both in Piracicaba – state of São Paulo, in addition to the Centro de Memória e do Museu da Imigração, in Santa Bárbara d'Oeste – SP. These institutions contain, in their collections, files of private origin, donated, but with public access. The private archives, still in the possession of the descendants of the immigrants, were also relevant to this work.

The collections of educational institutions served as a source of primary and secondary documentation, namely the libraries of the Centro Universitário Salesiano de São Paulo – UNISAL/Americana (rare works) and the Museu da Escola Superior de Agricultura 'Luiz de Queiroz' – ESALQ/USP, in Piracicaba – SP.

US immigration to Brazil³

The economic, educational, community and social reality that is found today in the region of Americana and Santa Bárbara d'Oeste, in the State of São Paulo, suggests that there was some influence of North American immigrants, from 1865 onwards. - exile of citizens from the so-called 'Confederated States of America', this immigration to Brazil had three main destinations: the region of Americana and Santa Bárbara d'Oeste, in the State of São Paulo; the region of Iguape, in the south of the State of São Paulo; and the State of Pará⁴. After the American Civil War, Confederate citizens found themselves in a deplorable economic and social situation. Cities and countryside were devastated by the hard and painful conflict. Brazil, with the support of Emperor Dom Pedro II, was looking for cotton specialists, with the expectation of entering the weaving market dominated by England. In that period, North American southerners were the largest cotton exporters in the world, given the favorable climate and soil. They

(2009, p. 124, emphasis added) considers that "[...] the primary reason for this emigration was wounded pride, the loss of the power to influence politically and the humiliations suffered after the defeat. Fulfilling the 'designs of God as a chosen people', conquering Latin America, seems to have been something secondary, if at all important in the decision to emigrate of these North Americans, who we see more as an unmanifest Destiny". Thus, it was not our objective to establish a boastful and laudatory speech to North American immigrants, but to verify, from multiple sources, their technical mastery in the field of agriculture, allied to the process of transmission of agricultural knowledge, analogous to that of non-educational education. formal.

² It is not the object of this article to analyze the origins of agricultural technical education or the Practical Agricultural School of Piracicaba. For that, it is recommended to read Perecin (2004).

³ It is beyond the scope of this work to analyze the Brazilian and São Paulo immigration policy. Therefore, it is recommended to read Zorzetto (2000).

⁴ Other attempts at colonization were undertaken in the states of Paraná and Espírito Santo, without much success.

established colonization societies that sent representatives to Brazil, to get to know the country in terms of climate, soil, people, culture and opportunities (Dunn, 1866).

Englishman James Heywood had already published an article (in June 1864), in the form of a report, in which he created a very interesting picture of Brazil, in economic, political and social terms. It stated that coffee, sugar, cotton and tobacco would be the main agricultural products of the country (in 1852-57 cotton production was 620,871 pounds, accounting for 5,518,850 Mil Réis in value)⁵. According to the author, the quality of Brazilian cotton was deteriorating due to lack of care in production.

The pioneers to visit Brazil were Robert Meriwether and H. A. Shaw, as well as Charles Gunter and the Reverend Ballard S. Dunn. He published a book which is a reference in the dissemination of Brazil to future settlers (Dunn, 1866).

According to Nash (1939),

[...] 'southern' North Americans who, disgusted with the outcome of the civil war, abandoned the homeland where captivity had just been abolished and set out in search of other places where their favorite system of economic exploitation still flourished. During the first decade that followed the end of the war of secession, groups of these insubmissive rebels were to be found in the vicinity of Curitiba, in Campinas, in Rio das Velhas, in the hinterland of Minas, in the lower part of the Rio Doce, in Bahia, in Pernambuco. and even in Pará, near Santarém, on the banks of the Amazon (Nash, 1939, p. 205-206, author's emphasis).

As Weaver (1961) pointed out, for the ex-Confederates, the emigration from the United States to Brazil was not a spontaneous action of rash men, but the result of studies, reflection and deliberate planning, since several southern libraries had, in their collections, books about Brazil. In addition, two missionaries, Daniel Parish Kidder and James Colley Fletcher (the first, a Methodist and the second, a Presbyterian), who worked in Brazil, published a joint work in 1857, which brought relevant knowledge to those who intended to emigrate. In this sense, Weaver (1961) emphasizes that those missionaries, at first involuntarily, gave a great impulse to the emigration movement from the South of the United States to Brazil.

According to Zorzetto (2000, p. 33), in 1865, dozens of agents from North American immigration societies were in Rio de Janeiro to contact their countrymen established here, with the aim of intermediating relations with the imperial authorities responsible for the approval of contracts for the transport of immigrants, mediation and demarcation of the chosen lands, exemption from payment of customs taxes on tools brought by immigrants and agricultural implements, among other advantages⁶.

As soon as the idea of leaving the country began to develop among the defeated Confederates, they began an intense reading of these reports about Brazil, its government, its population and its customs. New editions of *Brazil and Brazilians* had to be printed in 1866, 1867 and 1868, and these included a section with information of special interest to emigrants (Weaver, 1961).

Doctor James MacFadden Gaston, from South Carolina, also traveled through the Province of São Paulo, publishing the work *Hunting a Home in Brazil*, disseminating information for the settlers (Gaston, 1867). Southern colonels McMullan and Bowen arrived in Iguape after a voyage of great difficulties⁷. The families settled there stayed for less than four years in the place, when they decided to go up the mountain in search of other better established settlers (Griggs, 1987). One of these, in the region of Campinas - SP, was colonel and senator from Alabama, William Hutchinson Norris, disembarked in December 1865 in the port of Rio de Janeiro and established on the banks of the Ribeirão Quilombo, in present-day Americana. The village formed there became known as 'Villa dos Americanos' or 'Villa Americana'. Norris will be studied further, in his initiative to establish agricultural knowledge transmission practices.

Of climate, soils, cotton and agricultural technology

In order to study the role of North American immigrants in the transmission of their agricultural knowledge, it is necessary to understand the situation they found here in terms of climate, soils, agricultural crops and mechanization. The North Americans could only provide their knowledge in these subjects if they found favorable conditions in their previous experiences in the United States. This is the purpose of this section.

⁵ Conversions of historical values of Brazilian currencies can be made on the page of the newspaper *O Estado de São Paulo*, retrieved from <http://acervo.estadao.com.br>. By conversion, this amount would today have a value of R\$ 678,818,550.00.

⁶ The effects of this tax benefit for the entry of North American agricultural implements into the country can be seen from the installation of immigrants and the consequent development of the transmission of agricultural knowledge in the region under study.

⁷ There is an account of this trip, written by Sarah Bellona Smith Ferguson, now in the care of one of her descendants, Robert Lee Ferguson, from Piracicaba - SP (personal communication in October 2017). The text, originally in Portuguese, was translated into English by Cyrus Dawsey and James Dawsey (1995) and is in chapter format in the book *The confederados: old south immigrants in Brazil*.

Arriving in Brazil, agriculture became the main activity of the North Americans, regardless of their previous experience in the field. Oliveira (1985) states that even those who were not farmers were led to work the land, due to the need for subsistence. As mentioned before, there was a clear interest on the part of the Brazilian imperial authorities in the arrival of the North Americans, in order to make cotton culture viable in the country with new planting techniques - at a time when this raw material was scarce in the world market, given the Supply disruption caused by the American Civil War (Gussi, 1997)⁸.

The similarities between the original conditions in the United States and what was found in Brazil ended up facilitating the undertaking. According to Harter (1985), in the interior of the State of São Paulo, there was sufficient rainfall, a very low chance of frost and natural soil fertility – ideal factors for the implementation of cotton as a commercial crop. The group of North Americans that went there found, in the region of Americana and Santa Bárbara d'Oeste, a lot of similarity with their American states of origin (Alabama, Georgia and South Carolina).

In Gussi (1997) there is a report that the red lands of Santa Bárbara resembled those of “[...] Alabama, da Geórgia, do Sul tão querido” (Gussi, 1997, p. 58). The then Province of São Paulo was described as the one that best suited the conditions for planting cotton - given the climate, soil fertility and landscape that reminded the South of the United States (Dunn, 1866; Gaston, 1867). Harter (1985) states that part of the success of the Santa Bárbara d'Oeste and Americana colonies was due to the ‘terra roxa’ soil (reddish, structured clay soil with excellent natural fertility).

Cotton has, in the historical period studied here, contextual, and seminal importance. According to Hurt (2015), cotton production by the southern states, during the Civil War, in the United States, had the *status* of military power, given its strategic demand for England. There was also the widespread idea in the North American South, that ‘agriculture was a gift from God, he valued his homeland’. Cotton therefore becomes an object of diplomatic value - for all these reasons.

According to Zorzetto (2000), of the 50 landowners who grew cotton in Santa Bárbara in the early 1870s, 40 were North Americans. When the migration of southerners gained intensity, according to Horne (2010),

[...] in some sectors of the United States, the possibility that the cotton industry of Brazil, encouraged by the southern exiles, would come to offer serious competition to such an industry [in the United States] [...] The rebellious exile James Gaston certainly thought in the same way: ‘the harvest here is better than in the United States’, he declared, ‘and the cotton fiber is superior to the average quality grown in the South, which, added to the fact that it grows here two years in a row on the same stem, gives cotton grown here an advantage over cotton grown in the United States’ (Horne, 2010, p. 298-299, author’s emphasis)

Canabrava (2011) quotes Carlos Ilidro da Silva, a farmer and editor of the newspaper *O Agricultor Paulista*, published in Itú, which dealt with cotton cultivation in the Province of São Paulo. The aforementioned rural producer even conducted experiments on the planting of various species of cotton in relation to the soils of his properties. The author points out that the farmer

[...] recommended siliceous lands, red and black, not excluding clay, in the light of the ‘experience of North American farmers’, with preference for land cultivated many times. There was also a precaution against planting in the purple lands, where the cotton plant only produced well in the first two years [emphasis added] (Canabrava, 2011, p. 207, author’s emphasis).

Thus, the hypothesis of transmission of practical agricultural knowledge by the North Americans is evidenced. In the same sense, Clark (1993) confirms the role of the North Americans as introducers of cotton seeds and plows and recognizes their influence on Brazilian agriculture as a product of the individual skills they brought from the United States.

Regarding the agricultural practices of North Americans, Henriques (2015) cites the report by Capanema (1857), which already described rational methods of using plows and other agricultural techniques. Antonio Carlos Botelho (the authors are removing note 9) (1901) also encouraged the modernization of agricultural techniques and practices in the country, having been the designer of the São Paulo agricultural development model in the early 20th century. He was excited about the North American model of agriculture and development. In a statement given on one of his trips to the United States, he said:

⁸ Gussi (1997) himself states that cotton production in Brazil would be cyclical, with moments of great external demand, but also with episodes of commercial failure, which would eventually generate local cotton processing in Americana, which he believed to be the future. textile hub of the State of São Paulo.

Your country should be the main model of that material and industrial progress that Brazil so badly needs. South America, and especially Brazil, should seek to excite emulation with the industrial advance of the United States. I was so impressed by this idea that I intend, soon after my return to my country, to advocate the study of the English language, not only to facilitate our relations, but also to organize frequent agricultural and industrial excursions to the United States, for the education of our youth eager to learn (Capanema apud Henriques, 2015, p. 167).

In the presentation of the report to the then President of the State of São Paulo (São Paulo, 1908), Botelho (1901) describes the North American farmer as a user of the plow in any type of soil, not waiting for the ideal state of preparation of the same, when contrary to the Brazilian farmer, used to exploring new fields when signs of exhaustion showed up – called a *sapezeiro*. This one did not treat the soil through plowing and fertilizing.

By definition, a plow is an agricultural implement with one or more rigid blades, which tear the soil creating a furrow. The moldboard plow, introduced by the North Americans, has a curved blade, with the aim of inverting the soil of the furrow created (Bellis, 2019). The first plows, prior to moldboard plows, were nothing more than iron spikes that scratched the soil, preparing it to receive the seed.

Mialhe (1974) defines 'operating capacity' of an agricultural machine as the amount of work performed in a unit of time. As North American moldboard plows could work a larger area of land than the less efficient domestic equivalents, they had a superior operational capacity and were much more productive.

For Silva (2007), the North Americans had regional recognition for the use of agricultural implements – such as the aforementioned plows – in soil preparation. As pointed out by Dawsey (1995), the American immigrant Sarah Bellona Smith Ferguson already reported, in 1865, that plows were not in use in the colonized regions until the North Americans introduced them.

Harter (1985) states that the Santa Bárbara d'Oeste and Americana region had not yet adopted basic agricultural implements such as the plow, shovel, soil tillage harrow or even the rake. Gaston (1867) also reports that the only tillage he and other farmers observed was the hoe, a predecessor of the more efficient plows. Gaston (1867) states that he noticed little interest from the native population in modernizing the agricultural process of soil preparation and cultivation, since in all his travels through the Province of São Paulo he saw only three farmers using what could be called a plow. The same author predicted that the use of plows in cotton – a crop that already attracted the attention of farmers, given the opportune moment for its planting and commercialization – could increase production by 50 percent, because of the greater ease of planting in rows and for the best rooting of the plant (Gaston 1867).

Non-formal education as a process: agricultural education provided by two North American agents in Santa Bárbara d'Oeste and Americana – SP

Having analyzed the more technical variables that condition the study carried out here, we now undertake a prospection regarding the educational issues involved. This raises the possibility of identifying, in the process of transmitting knowledge, an analogy with non-formal education, especially when investigating agricultural training practices. This knowledge was offered by North American immigrants from the Estados Confederados da América⁹ and their first-generation descendants, still closely associated with the skills and competences practiced by their North American ancestors, to Brazilians in the regions focused on in this study.

Of the various possibilities of education in society, there are those that are not carried out in the space and time of the school, although they can be complementary to them. Such learning occurs through experiences and experiences. In this line of reflection, 'non-formal education' can be defined as any educational process that goes beyond the walls of the school – an official institution representing the knowledge historically systematized by society (Von Simson et al., 2001). Gohn (2010) suggests that non-formal education can create opportunities for knowledge about the world that surrounds individuals and their social relationships.

The concept of education involves more than thinking about schools and formality. So,

[...] formal education means the type of education organized in a certain sequence and provided by schools, while the informal designation encompasses all educational possibilities in the course of an individual's life, constituting a permanent and unorganized process. Finally, non-formal education, although it also obeys a structure and an organization (different, however, from schools) and can lead to certification (even if this is not the purpose) still differs from formal education in terms of the non-fixation of times and places and the flexibility in adapting the learning content to each specific group (Fernandes, 2009, p. 78).

⁹ CSA: *Confederate States of America* – Confederate States of America, as opposed to the United States of America.

When considering, as in the case of this work, different fields of proposals (including community ones), it is seen that, in such possibilities, there is a commitment to issues that are important for a certain group - a fundamental point for the development of non-formal educational work. This is even more important, at certain times - such as what was examined in this study - than any other pre-established content by people or institutions (Fernandes & Garcia, 2006).

In the analysis carried out here, the educational situations provided by North American immigrants and their immediate descendants are processes that mediate learning relationships, with the objective of teaching or exercising techniques and/or skills, initiated in a process of transmission of knowledge analogous to that of non-formal education. For Fernandes & Garcia (2006), when one thinks about who are the professionals or educators responsible for such specificity of education, one can question their previous experiences and the way in which they seek and guarantee the proposed training. These authors state that specific professional training is not always required in a non-formal educational process. And Fernandes (2017) comments that the practical work of professional-educators can reveal evidence of their previous experiences - which is the case, in the proposal of the North Americans.

The perspectives of non-formal education show, therefore, the importance of educational and training experiences parallel to the formal one, allowing the claim to be, the first, another possibility of educational experience, which operates in sectors where formal education does not operate, without compete with it, but aiming to complement it (Park, Fernandes, & Carnicel, 2007).

Based on the introduction of technology and know-how provided by the North Americans, the process of transmission of knowledge will now be considered, analogous to that of non-formal education. It will try to justify the hypothesis of this work - that this type of transmission of knowledge was offered in the region of Santa Bárbara d'Oeste and Americana in the period between 1865 and 1915, with educational and economic influences in the communities of the surroundings. The concept of non-formal education applies to the case dealt with in this study (the authors are removing note 12) as it is, here, an education carried out in an autonomous and independent field of the formal (school), with no connection with any aspects of education. under the endorsement of the Ministry of Education - which dictates the norms of formal education.

Following are two case studies of subjects that can give an experiential support to the theme developed here: Robert Lee Ferguson and William Hutchinson Norris.

Son of Green Ferguson and Minerva Charlotte Rowell, born in Chester County, South Carolina, Confederate States of America (Oliveira, 1978). His father was a soldier in L Company of the South Carolina State Troops during the Civil War, and fought General Sherman on his march to the sea. With the end of the conflict, he surrendered in Columbia, South Carolina, in April 1865. In Zorzetto (2000) there is information that Green Ferguson would have acquired 24 acres of thatch land, considered barren, in Santa Bárbara. d'Oeste, Sao Paulo. He burned the thatch, applied the horse-drawn plow, and planted cotton and corn. This shows North American entrepreneurship in the face of conditions considered unfavorable by native Brazilians in the region.

Robert Lee Ferguson was born in Brazil on June 9, 1871, in São Paulo, and died on June 24, 1958, in the city of Santa Bárbara d'Oeste, where he is buried at Cemitério do Campo. He was married to Mary Elizabeth Cullen and worked at the Escola Agrícola Prática de Piracicaba (1903-1914).

According to Dawsey and Dawsey (1995), Lee Ferguson was administrator of the Fazenda Modelo of the Escola de Agronomia idealized by Luiz de Queiroz, which had the republican objective of showing the possibility of agricultural efficiency in Brazil. In fact, Perecin (2004) treats Fazenda Modelo as one of the founding units of the School, along with the Posto Zootécnico. The author mentions that, in 1902, the teaching of agriculture was in charge of the 4th Chair, having been hired the master of cultures Pierre F. Gelas, trained in Agronomy, Irrigation and Drainage. However, he was dismissed by Milton M. Underdown in 1903 (who had been hired in December 1902, in the United States, as independent director of Fazenda Modelo). According to Perecin (2004), Gelas was replaced by Lee Ferguson.

Turns out that Underdown also ended up away, due to disagreements with the director of the Agricultural School. He was replaced by John William Hart, a professor at the University of Illinois, who took up the position in the second half of 1905. While the new director of the Model Farm did not take over, Lee Ferguson temporarily managed the unit¹⁰.

Regarding this period and these facts, there is, in the ESALQ collection, a record, at least curious, in the report of the school director to the Secretary of Agriculture of the State of São Paulo, to which the Agricultural

¹⁰ Reference to Robert Lee Ferguson in control of Fazenda Modelo in 1910 was found in the collection of the ESALQ Museum. Other school teachers are also referenced.

School was subordinate at the time. The director claims that the person in charge of the Model Farm would have informed that there was no one qualified to participate in the State plowing contest (an event highly valued, at the time, by farmers and rural producers), which was strange, as it was a model farm. Now, Lee Ferguson worked on the farm and was competent, as Perecin (2004, p. 278) says: “[...] he was an expert ploughman, a descendant of the Confederates transferred to Brazil in the mid-19th century. His family's oral tradition recalls that he provided services to the school, instrumenting the mechanical apparatus, mainly the aratories”¹¹. This leads us to believe that he could have been nominated for the activity, but the heavy atmosphere at the institution ended up preventing him.

In the period immediately prior to Lee Ferguson's connection with the Agricultural School, the director of Fazenda São João da Montanha (future ‘Escola Agrícola Prática de Piracicaba’ and current ‘Escola Superior de Agricultura ‘Luiz de Queiroz’), Léon Alphonse Morimont (1896) admits the lack of plows in the locality and states that neighboring farmers used to visit the School to borrow qualified plows. Gussi (1997, p. 96-97) recognizes that the North Americans were very good plows and were able to teach how to handle plows on farms in the region, which generated additional income for holders of such competence. Here, therefore, is a non-formal technical activity of a community character.

William Hutchinson Norris was born on September 17, 1800, in the city of Oglethorpe, Georgia, United States, and died on July 13, 1893, in the city of Santa Bárbara d'Oeste, State of São Paulo. He landed in Brazil on December 27, 1865, thus being one of the first American immigrants to arrive in the country.

Going up the Serra do Mar with his son Robert (a veteran of the Civil War) towards São Paulo, he ended up becoming interested in land in the plain region that ran from Campinas to Vila Nova da Construção (currently Piracicaba). There he acquired a farm, in the *sesmaria* (land grant) of Domingos da Costa Machado, on the banks of the Ribeirão Quilombo. According to Zorzetto (2000), this property had 300 acres of São Paulo area¹².

Entrepreneurial in nature and endowed with extensive agricultural experience, Norris initiated training activities in plowing and other agricultural practices with local and regional farmers. Jones (2015) reports that Norris made money by teaching other farmers the technique of using the plow:

Many came to see how the Americans planted their land, others wanted to learn. Without realizing it, the colonel soon had a good practical school of agriculture. The students worked on the teacher's farm while the teacher taught them how to handle the donkeys and hold the plow firmly on the ground; and still paid for the privilege (Jones, 2015, p. 154).

The North Americans ended up being the base for the supply of new technologies to Brazilian producers, given the technological advantages and know-how: the manufacture and import of plows, the manufacture of wheels with iron rims and wooden spokes, trolleys and the wagons. The author states that the plows brought by the Norris family, as early as 1866, generated such good results that, in a short time, the farmers in the region became interested and the Norris began to teach the new cultivation techniques they used on their land, offering to the community practical agricultural skills.

Frank Goldman (1972, apud Dawsey & Dawsey, 1995) also recognizes the participation – notably technical – of North American immigrants in the regional economy, due to the status obtained on the farm, contributing to local progress with their knowledge.

Mesquida (1994) described the practice of non-formal agricultural technical education offered by immigrants to farmers already living in the geographic space to which this study refers.

The region was in decline due to the depletion caused by the sugarcane culture and ended up going through an economic renaissance, given the knowledge and innovative agricultural practices brought by the Americans, in addition to the transmission of *savoir-faire*, diffusion of an entrepreneurial spirit and new ideas, and their unique way of educating.

The author confirms that “The Norris successfully dedicated themselves to cotton cultivation, employing ‘innovative’ techniques to work the land and increase production” (Mesquida, 1994, p. 42, author's emphasis). This attitude ended up encouraging the agglutination of other immigrants in the Santa Bárbara d'Oeste region.

Neeleman and Neeleman (2016) report that the Norris bought mules that were trained to work the plows they had brought from the United States. They had to do it alone, as no one had experience with this type of service in the region. According to Dawsey (1995), Norris drew the attention of the community around his

¹¹ Information confirmed through an interview with a great-grandson of Lee Ferguson, Robert Lee Ferguson, from Piracicaba – SP (conducted in November 2017). Mr. Robert Lee spoke of the family's agricultural tradition, arising from the activity carried out in the South of the United States, at the time of the Civil War or Secession. There are agricultural equipment that belonged to Lee Ferguson at Cemitério do Campo, in Santa Bárbara d'Oeste – SP. See also Gussi (1997), when he talks about the agricultural competence of the Americans in the region.

¹² A bushel in São Paulo measures 24,200 m³, that is, 2.42 ha.

property due to the moldboard plow (or 'American plow', as it was called locally), which was more efficient than the 'Brazilian plow' or even the 'Latvian plow' used by the Latvian immigrant community, settled in present-day Nova Odessa. The moldboard plow would have given Americans superior production and also possibilities for other types of financial income¹³.

Norris added income to the family budget when he gave practical plowing courses to farmers in the region. According to Mesquida (1994), he informed his son Frank (who had remained in the United States) that he had raised 5,000 dollars in a single year by teaching agricultural courses. The author considers this information the basis for stating that Norris was, therefore, a pioneer of agricultural education in the region.

The author makes the same comment in the following paragraph, when referring to the aforementioned descendant Robert Lee Ferguson as having been administrator of the Luiz de Queiroz farm, in Piracicaba - SP, making it a model farm to serve as an example to visitors to the region. Here is a historical mistake, of inversion of facts and dates. As pointed out earlier, his eponymous ancestor Robert Lee Ferguson worked in a unit of the Escola Agrícola Prática de Piracicaba, called Fazenda Modelo, after the death of Luiz de Queiroz. It seems to us that there is a certain exaggeration propagated by the family tradition, which appears in some texts that deal with North Americans and their descendants. This comment of ours is of fundamental importance for the purposes of this work, as it is easy to conclude.

Neeleman and Neeleman (2016) state that many people came in search of practical field farming classes, in which Norris showed how to control the mules and keep the plow firmly on the ground (students paid for this type of instruction). William Norris then left the care of the property to his son, to teach agriculture courses at Fazenda Ibicaba, in Limeira - SP, whose owner - José Vergueiro, was the largest cotton producer in the country. Harter (1985, p. 69, our translation) also comments on the fact that "[...] his first year in Brazil was a financial success. He received the equivalent of fifty thousand dollars, part of which was earned with agricultural consultancy provided by the colonel"¹⁴.

The Secretary of Agriculture of the State of São Paulo, Carlos Botelho, encouraged the use of North American plows by Brazilian farmers and sent personnel to be trained for the '*Villa Americana*', given its fame (Dawsey, 1995). The author reports that the Brazilian republican government sent young North Americans to provide training courses across the country. Here, again, is the record of non-formal agricultural technical education provided by the Americans.

Another reference to the work of local training of North Americans is found in Jefferson (1928). The author talks about the qualities of North American plows in the fertile hills that became the agricultural site of the Georgians. And that one of them claimed to have earned money for the acquisition of his own farm by providing work for neighbors and training them in the agricultural arts.

Final considerations

After the documentary, oral and bibliographic analysis carried out here, it can be concluded that North American immigrants from the region of Americana and Santa Bárbara d'Oeste - SP, in the historical period from 1865 to 1915, in fact offered non-formal education of a technical and agricultural for the communities in which they were inserted after their arrival in Brazil. As they are competent ploughmen and farmers, they were requested for training in innovative agricultural practices.

The performance of the two subjects studied, Robert Lee Ferguson and William Hutchinson Norris, prove these events, ratified by their contemporaries, who recognized the expertise of the North Americans in the field of the plow and that they transmitted their expertise to the farmers of the region involved in this study, which produced supplementary income for holders of such competence.

It is affirmed, therefore, that the hypothesis of this work was verified, since the North American immigrants influenced the communities around their properties acquired in Brazil, specifically in the regions that today are the cities of Americana and Santa Bárbara d'Oeste, guaranteeing an increase in quality and quantity in agricultural processes, through non-formal education.

Regardless of whether US immigration to Brazil was a premeditated or random effort, it certainly contributed to local initiatives and enterprises in terms of the context and subject of this study.

¹³ Dawsey (1995) talks about John Domm, a Dutchman who lived in Texas, as the first moldboard plow maker in the Santa Bárbara d'Oeste region. And he claims that imports of agricultural implements from the United States were always associated with American immigrants, who had contacts in that country.

¹⁴ "[...] that his first year in Brazil was a financial success. He had netted the equivalent of fifty thousand dollars, some of it gained through the colonel's efforts as an agricultural consultant". According to the entry written by Cyrus B. Dawsey (2013, p. 5, our translation) to the *Encyclopedia of Alabama*: "Most of the confederate settlers near the town of Americana earned livings as farmers. They [...] brought new agricultural technology to Brazil, including the moldboard plow [...] including the elder Norris, soon became adept at instructing neighboring Brazilians in farming methods".

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