

SUSTAINABILITY OF PALM DATE'S FARMS AT OUARGLA; ANALYSIS OF SOME SOCIOCULTURAL CRITERIAS

DJELFAOUI Zineb¹ et CHAOUCH Saida²

1. *AgronomyExpert- Directorate of agricultural services, Ouargla, 30000, Algeria*

2. *Université KASDI Merbah Ouargla, Département Sciences Agronomiques,
Laboratory of Palm dates trees cultivation Research« Phœnix », Ouargla, 30000, Algeria*

Abstract : The rehabilitation and preservation of Palm dates trees heritage are strategically important, thus on the agro-ecological, economical and social level. They respond perfectly to all palm dates trees farmers concerns that the Government has supported ; through several programs for many decades including Local Initiatives Projects (LIP). In order to grasp the socio-cultural sustainability of palm dates farms, surveys were carried out on a sample of 16% of farmers joining the LIP through the oases of Ouargla; especially Ouargla, N'goussa, Zaouia labidia and Elhajira targeting criterias about farmers : thier age ; educational level ; descendants future activity and types of the agricultural workforce. The results show that the farmers are mainly elderly or adults (86.9%), they are 60% illiterate but strongly attached to their oases while their descendants move towards other more gainful sectors. In the other hand, 64% of PILs are carried out by companies and design offices managed by young people, which can claim a certain reintegration of young people into oasis activity. Entrepreneurship can create a training effect for young farmers to might be interested in oases activities. Regarding, the workforce, one of the most relevant indicators of socio-cultural sustainability, is for its half (52%) family type with a fairly good upgrading of seasonal workforce (41%). The results agregation of the criteria developed in this study indicates a trend towards the possibility of improving the socio-cultural situation. Thus, the sustainability of palm dates farms in Ouargla.

Keywords: Ouargla, Oasis, Socio-cultural sustainability, Local Initiatives Projects (LIP).

DURABILITE DES EXPLOITATIONS PHOENICICOLES A OUARGLA; ANALYSE DE QUELQUES CRITERES SOCIO-CULTURELS

Résumé : La réhabilitation et la préservation du patrimoine phœnicicole sont d'importance stratégique sur le plan agro-écologique, économique, et social. Ils répondent parfaitement à l'ensemble des préoccupations des phœniciculteur, que l'Etat à pris en charge à travers plusieurs programmes depuis quelques décennies notamment les Projets à Initiatives Locales (PIL). Dans l'objectif d'appréhender la durabilité socio-culturelle des exploitations phœnicicole, des enquêtes ont été réalisées sur un échantillon de 16 % des agriculteurs adhérant au PIL à travers les oasis de Ouargla, notamment N'goussa, Zaouia labidia et Elhajira visant les critères âge, niveau d'instruction des agriculteurs, l'activité d'avenir des descendants des agriculteurs ainsi que le type de la main d'œuvre agricole. Les résultats montrent que les exploitants sont majoritairement âgés ou adultes (86,9 %), ils sont à 60 % analphabètes mais fortement attachés à leurs oasis alors que leurs descendants s'orientent vers d'autres secteurs plus rémunérateurs. Parallèlement, la réalisation des PIL est prise en charge à 64% par des entreprises et bureaux d'études gérés par des jeunes ce qui peut prétendre une certaine réintégration des jeunes à l'activité oasienne. L'entreprenariat peut créer un effet d'entraînement des jeunes agriculteurs à un éventuel intéressement aux oasis. Concernant, la main d'œuvre, l'un des indicateurs les plus pertinents de la durabilité socioculturelle, est pour sa moitié (52%) du type familial avec une assez bonne valorisation de la main d'œuvre saisonnière (41%). L'agrégation des résultats des critères développés dans cette étude indique une tendance vers la possibilité de l'amélioration de la situation socioculturelle. Ainsi, la durabilité des palmeraies de Ouargla.

Mots clés : Ouargla, Oasis, Durabilité socio-culturelle, Projets Initiatives locales (PIL).

Introduction

Characterized by spaces made fertile by man, the pivot of all oasis activity, oases have always created a favorable environment to life at arid or semi-arid space [7]. However, oasis society has undergone several socio-economical and cultural changes that have important consequences on the role of the palm farm for the oasisian [11]. At Ouargla, old oases area is estimated to 13,000 ha with a density average of palm trees between 250-350 per hectare [8]. However, with Hassi Messaoud that is one of the most important oil fields in the world, the province is strongly struck by the loss of the agricultural labor force, in particular young people thus creating an obvious gap for the oasis sustainability and eventually the oasisian activity. IDDER et al (2011) [9] show that the old palm farm is a victim of remarkable neglect which transforms it into a weak agrosystem.

Aware of this situation and its repercussions, the Public Authorities have opted for improving the conditions of these spaces through several rehabilitation programs. Notably, the Major Works undertaken between 1994 and 1998; support for agriculture by the National Agricultural Development Fund (NADF) since the early 2000s [6]. And in particular, the Local Initiative Projects (LIP) started in 2012 and defined as a set of actions financed from public funds in a localized space, where farms tend to develop their productivity performances, designed and coordinated by a participatory approach [4]. These are 28 projects for a budget of 489 million DA given by the state and mainly target

structuring actions which include the study, monitoring and realization of agricultural tracks; opening and maintaining drains; follow-up study and implementation of irrigation system; mobilization and / or rehabilitation of wells. Farmers joining these projects collaborate in secondary actions related to the sandy amendment; weeding, uprooting of unproductive palm trees and making windbreaks.

According to TRABELSI (2017 [3]), sustainable development is not only to find answers to environmental problems, but also to meet society needs in social and economical development: conflict against poverty and food insecurity, change of the habits of consumption, protection of human health. In fact, the human being constitutes the keystone of any plan of sustainable development as reported in the statement of Rio, on 1992: « The human beings are in the centre of concerns related to sustainable development. They have the right to a productive and healthy life in harmony with nature », [10].

This work aims to verify whether the efforts made could contribute to improve the situation? Do they encourage a trend towards the sustainability of Ouargla palm groves, in particular in its socio-cultural component, we carried out this research based on investigation about farmers joining the PIL in the oases of Ouargla, N'goussa, Zaouia labidia and Elhajira. This study lies on four criteria, namely, the age, the level of education of the heads of the farms, the future activity of the descendants of the farmers and the agricultural workforce.

1- MATERIAL AND METHOD :

1.1-LOCATION OF THE STUDY SITE

Ouargla Province is located in the southern-east of Algeria, 800 km from the capital Algiers. It covers an area of 163,230 km², and is one of the most extensive administrative communities in the country.

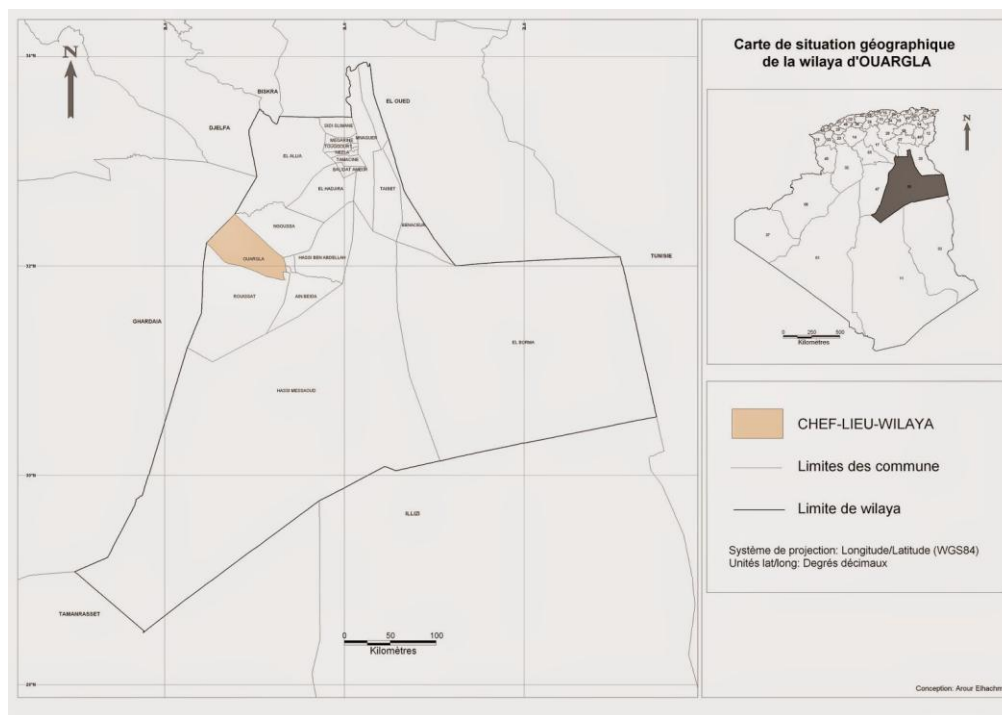


Figure 1 : Geographic location of Ouargla

2 - METHODOLOGY

2.1- SAMPLING

First phase of bibliographic research was held and interviews with technicians from the Directorate of Agricultural services whom carried out the LIP, followed by a pre-survey served to diagnose the sampling. Considering the expanse of oasis farms area across the Province and considering the specific approach in each site, its economic importance, involvement of the profession to achieve different actions, helped in sites identification and selection. Indeed, 1661 farmers made a

commitment to participate in project's achievement, the total area of palm groves targeted by these projects is 4.440 ha, spread over 09 municipalities touching the three mainly agro-ecological zones, namely;

- Oued Righ zone : Meggarine, Sidi Slimane, Temacine, Zaouia El Abidia, Beldet Amor, about 64 %.
- Ouargla depression: N'goussa, Ouargla, Sidi Khouiled about 18 %.

- El Hadjira zone : El Hadjira about 18 %.

Based on this situation, we opted for a stratified probability sample comprising 168 farmers means 16% of the farmers joining these projects.

2.2- INVESTIGATIONS

The approach is inspired from the agricultural farms analysis methode adopted by Capillon and Manichon (1991), on the basis of a semi-open survey dealing with socio-cultural criteria,the following aspects have given importance :

- Farmers age and level of education ;
- Future activity of farmer's children;
- Type and number of farm labor;
- The identification of companies and studies offices that participated in the realization of the LIP, in particular by the age of

entrepreneurs and farm laborers.

3 – RESULTS AND DISCUSSION

3.1- FARMER’S AGE

The ageing of the agricultural labour force is one of the major problems causing the abandonment of the old palm grove.The results in Figure 1 show that a percentage of 46.4% of farmers are advanced age who are very often present in their palm groves, very attached to their oases and they could be a source of transfer of know-how.40.5% of adherents are considered adults and only 13.1% is represented by youth.

Referring to data from DPSB (2017) [5],if properly run, Ouargla has a working age rate of 57.61% (16-59 years old), and this age group is an important force for the economical development , especially for the farming sector. This leads to say that the young active mass turns rather to oil activities and services leaving farming activities to elders and adults persons.

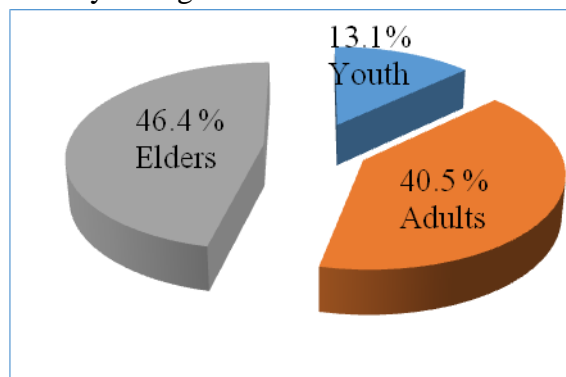


Figure 1 - Age of farmers in the old palm groves at Ouargla

1.2-AGE OF PROJECT CONTRACTORS AND LABOURERS

The integration of youth into the Oasian activity is imperative to remedy the alarming current situation of the old oasis. Knowing that young people have precious strengths and real influence to

improve the world around them [12]. In this perspective, the majority of the project's actions undertaken in LIP at the palm groves are granted to young entrepreneurs. And their age range is 64.28% between 30 and 40 years old, the rest is less than 50 years old (Figure 2).

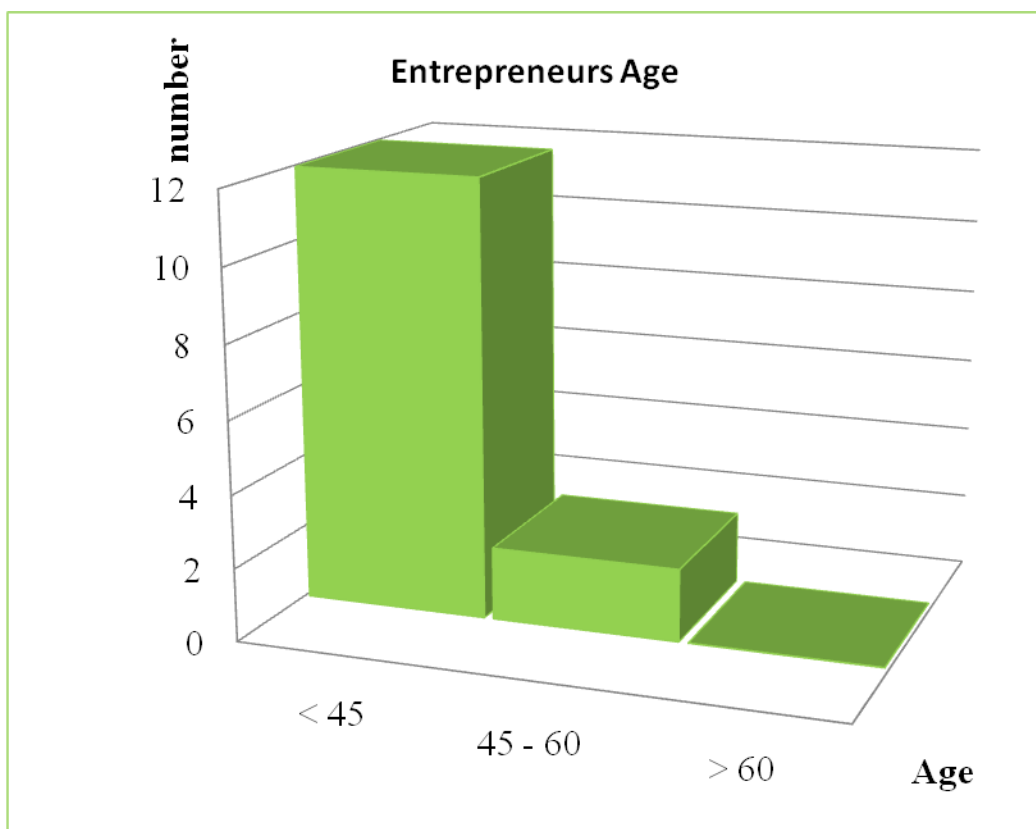


Figure 2 - Age of LIP operators at ancient palm groves in Ouargla

3.3-FUTURE ACTIVITY OF FARMERS CHILDREN

Field investigations show that farmers (parents) have a different vision about their children's oasian activity as a main occupation in the future. The observation undoubtedly shows the lack of interest that is about 60.1% of parents in farming as a future occupation for their

children. Priority is given to extra-agricultural activities (Table 02), in particular the hydrocarbon sector. These Oasians want to have agriculture as a main activity for themselves but not for their children, they want to preserve their precious heritage but are worried about the economic context that their children may face.

At the same time, almost 40% of farmers want their children to become farmers. For this category, it is not necessarily a choice but a cultural orientation towards a patrimony, which they

have inherited from previous generations and they want to pass it on to their children. However, economic risks are calling into question their hopes.

Table 02: Future activity of farmer's children

Activity of the children in future	Number	Percentage
Agriculture	67	39.9 %
Hors agriculture	101	60.1 %

1.4-FARMER’S EDUCATIONAL ATTAINMENT

A great variability of this parameter and its influence on the level of farmer's understanding and communication emerge from the investigations. In fact, Farmers attainment is marked by a very low rate of academics and high schoolers, namely 3.6

and 7.1% successively, followed by a rate of 14.3 and 14.9% (fairly equal) of farmers who have the primary and middle school level. The majority of farmers who have never attended school is 34.5% while those who can read and write in Arabic through Koranic school are 25.6%, as shown in the following figure.

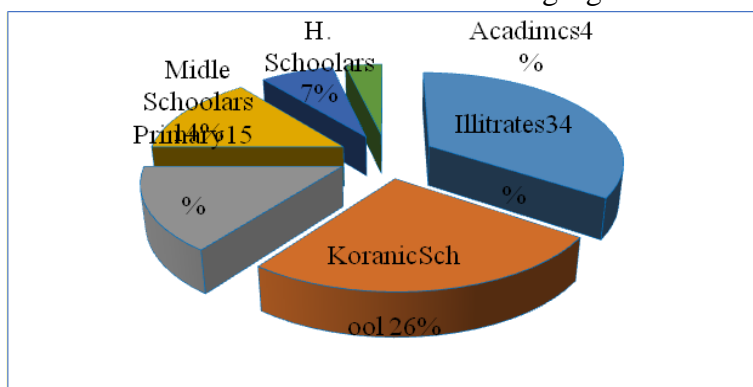


Figure 3- Educational level of farmers in Ouargla's old palm groves

At this level of analysis, it is important to emphasize that the low level of farmer's education limits their understanding to the participatory approach adopted by the various agricultural policies and to the overall sustainable development's context. Farmers with an acceptable educational

level may have other more remunerative activities, therefore they are only rarely present on their lands. As a result, their roles in improving information's communications on the LIP, on the sustainability of farms and raising awareness among farmers are strongly affected.

1.5 – AGRICULTURAL LABOR

The results of this study indicate that the permanent labour is insignificant In the farms of Ouargla province (Figure 4). Work at the farm level is carried out by a family

workforce (52%) and 41% of seasonal workers characterized by precious know-how; specialized in various cropping operations such as pollination, harvesting dates and cleaning palm trees etc...

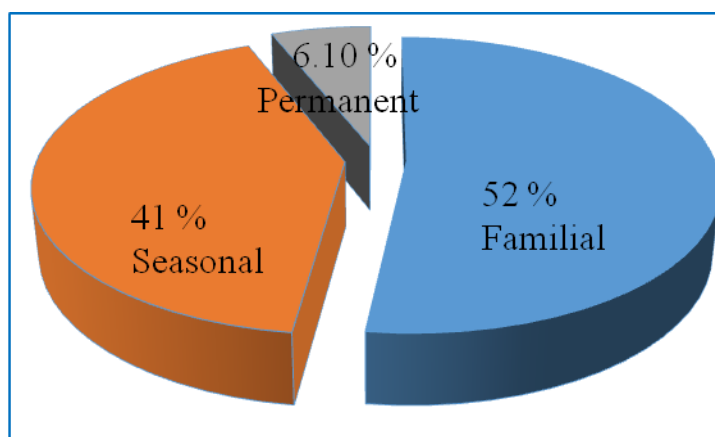


Figure 4: Type of workforce of Ouargla's old palm groves

CONCLUSION

The ancient oases of Ouargla assure 2/3 of the date's production. However, in addition to the anarchic and accentuated advance of urbanization, they are subject of big losses caused by induced fires and undivided joined ownership of agricultural land, resulting in an unfavourable land use structure. As well, the socio-cultural criteria, namely ; the farmer's age and level of education combined with the lack of succession and the scarcity of a professional workforce induce a neglect of the oasian activity estimated at more than 40% which threatens the sustainability of these oases [8].

Indeed, farm's sustainability is not limited to ecological sustainability, it has become accepted that there are also legitimate economic, social and cultural human needs that must be ensured in a sustainable society. Therefore, socio-cultural and economic dimensions must also be undertaken into account when considering sustainability [2]. In that way, efforts are made by the State. Especially, through projects with local initiatives to rehabilitate the old palm groves, launched in Ouargla's oases which are the executions of a certain number of actions for the preservation and development of the oases and oasian crops [4]. They aim to improve oases's conditions and thus allow a certain revitalization for

their activity and the enhancement of the socio-cultural criteria in the oases as well.

Due to the fact that the realization of different project's actions at palm groves level is carried out by companies and offices of study runned by youth. The results of this research confirm that the advanced age of workers in oases is clearly influenced by the current reintegration of youth into farm's activity. And this entrepreneurship could create a ripple effect for young people with a possible incentive to the oasian activity. Farmer's level of education is very modest, about 60% illiterate, which limits the understanding of the participatory approach adopted by the various agricultural policies, in particular projects with local initiatives. And this limits their role in the good quality of information communication and raising farmers' awareness to succeed various actions in the projects. Notwithstanding these generally elderly and modest farmers have the advantage of being strongly attached to their oases and being a source of know-how. While, their descendants, generally educated, orient themselves to other more remunerative sectors.

It is noticed that the agricultural labour force at the Ouargla oasis is half familial with a fairly good valuation of the seasonal workforce which is one of the most relevant indicators of socio-cultural sustainability.

Analysis of the data's study allows to confirm that efforts of the palm grove rehabilitation since 2000 have given good effect on farm conditions resulting in yields improvement [1]. Thus, the profitability of

the oases is improved and the projects with local initiatives have enabled a certain resumption of oasis activities by youth. This indicates a trend towards the possibility of improving socio-cultural criteria, and therefore the sustainability of Ouargla's palm groves.

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