

INFLUENCE OF RAINFULL VARIABILITY ON THE CULTIVATION OF COWPEA (*VIGNA UNGUICULATA(L.) WALP(L.)*) IN THE MUNICIPALITY OF LOKOSSA IN BENIN

**B. SEDAMI ADJAHOSSOU¹, PASCAL GBENOU^{2,3}, GERVAIS A. A. ATCHADE^{4,5} &
EXPEDIT WILFRID VISSIN^{4,5}**

¹Departement du génie de l'Environnement Ecole Polytechnique of Abomey-Calavi (EPAC), Benin

²Université d'Agriculture de Kétou, Benin, Laboratoire de Recherche en Ecologie Animale et de
Zoogéographique(LaREZ), Ketou

³Ferme Ecole SAIN BP 21BP , Adjohoun, Benin, West Africa

⁴Laboratoire Pierre Pagney: Climat, Eau, Ecosystèmes et Développement (LACEEDE)

⁵Département de Géographie et Aménagement du Territoire (DGAT)

ABSTRACT

Cowpea, is the most leguminous cultivated in the Municipality of Lokossa as a source of protein and significant energy for populations. This study is aimed to analyse impacts of rainfall variability on the cultivation of Cowpea in this municipality. So the methodology is essentially based on documentary research and field work based on the purposive sampling method taking into account 235 farmers. The ten-day, monthly and annual data of 1981-2011 and rainfall agricultural statistics of 1995-2011 were used in order to analyze the agro-climatic conditions, the Franquin climate balance, and also the water balance of the Cowpea cultivation to verify the critical phases of this culture. The analysis of data shows that the period (1981-2010) dry season are becoming more important than wet season. Indeed, the water needs are not sufficient throughout cowpeas 'cycle during the years considered. In 1981, apart from the flowering period where the availability exceeds of 1.73 mm with a quite lack of rain in the lifting period, the other phases of development of cowpeas were submitted to deficit water. In the light of these various comments, the cropping strategies developed by farmers are the adoption of new varieties of crops with short cycle (80%), the association of cultures (20 %), the redevelopment of the agricultural calendar (90%), cultures of off-season (3%), rituals to exorcise the evil spells to improve agricultural production.

KEYWORDS: Lokossa, Rainfall Variability, Cowpea, Adaptation of Strategy