



**UN trade &
development**



**NIGER REPUBLIC
MINISTRY OF AGRICULTURE AND ANIMAL HUSBANDRY
GENERAL SECRETARIAT**

**Advanced Satellite-based crop monitoring to increase resilience in
the face of global food insecurity**

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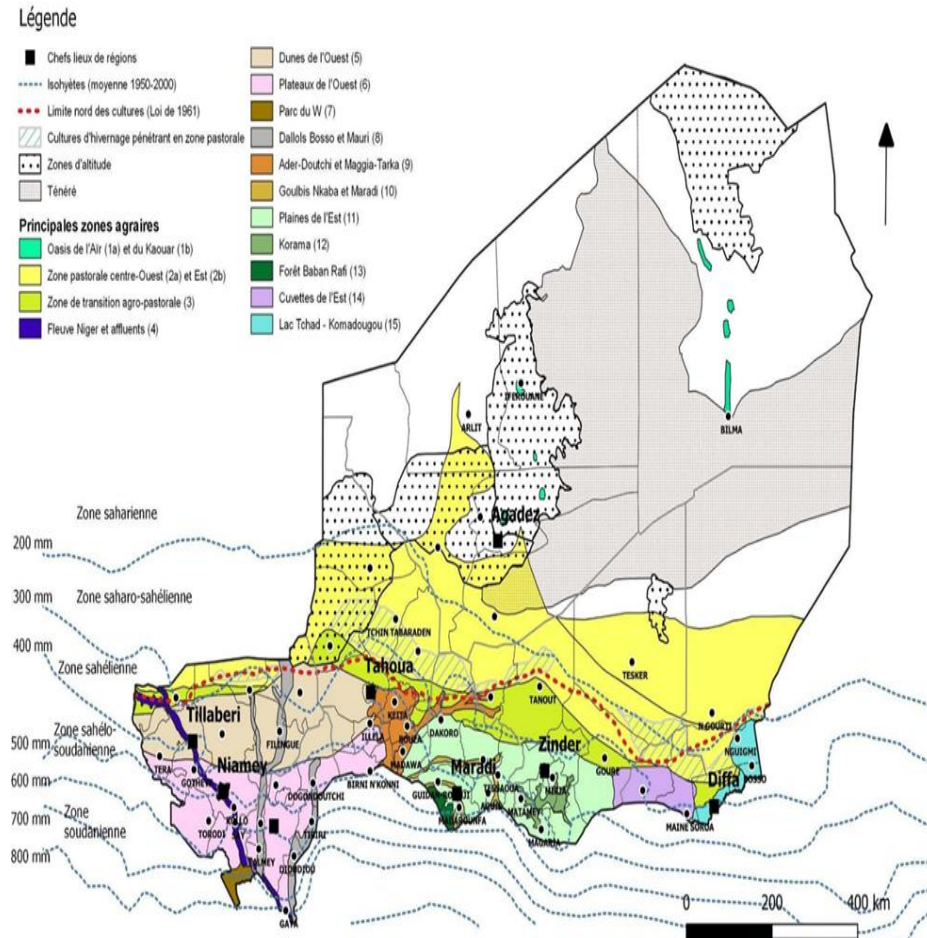
**ABUJA/ NIGERIA
2-5 july 2024**

PRESENTATION OUTLINE

- 1. Basic information on Niger's Agriculture,**
- 2. Main crops and their phenology**
- 3. Agricultural projects related to remote sensing,**
- 4. Current problems,**
- 5. Requirements and Expectation**

1. Basic information on Niger's Agriculture 1/3

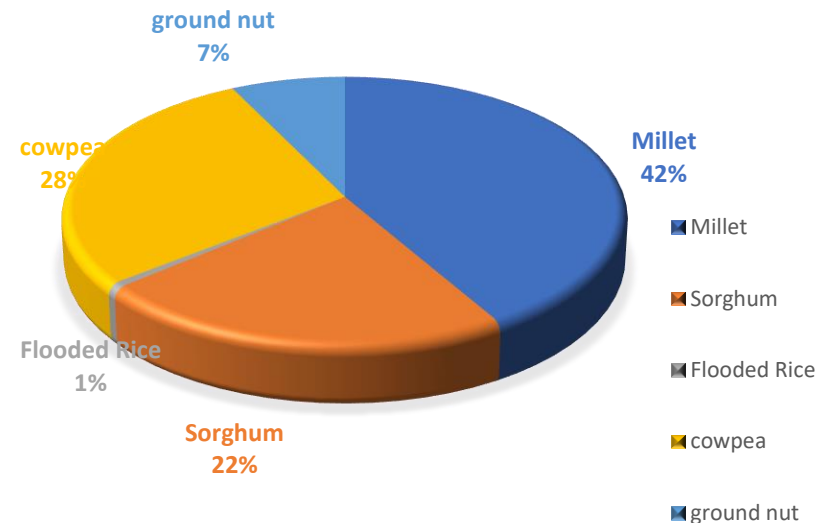
- Farming is the main source of livelihood for rural dwellers (84% of rural population)
- Agriculture is mainly a subsistence crop production which is characterised by little or no input use at small scale level
- Two cropping seasons: rainfed crop production (May – October) and irrigated crop production (November- March)



1. Basic information on Niger's Agriculture 2/3

- Millet is the most important and staple crop during the wet season (> 400mm) .
- Millet is usually intercropped with cowpea, sorghum, or groundnut.
- Sorghum is grown widely in the south, even in some of the driest areas.
- Other subsistence crops are maize, rice, wheat, cassava, groundnut,
- Along the Niger river, rice is grown as a flooded or irrigated crop and near ponds as an irrigated crop too.
- tomato, and onions are some of the irrigated crops

PERCENTAGE SHARE OF DIFFERENT CROPS_2023



1. Basic information on Niger's Agriculture 3/3

- Importance and type of intercropping ([2004-2008 Agricultural census](#))

Main types of intercropping 85%

- **Millet+ cowpea: 42 %**
 - **Millet+ Sorghum+ Cowpea : 35%**
 - **Millet + Sorghum: 8%**
 - **Sorghum+ cowpea**
 - **Millet + cowpea+sorrel**
 - **Millet+ Sorghum+ groundnut**
 - **Millet+ cowpea+groundnut**
- } 1 to 3 % each

Crop production statistics for different regions of Niger (2023) in metric tonnes

Region	Millet	Sorghum	Maize	Rice	cowpea	ground nut
AGADEZ	27	30	537	37	51	765
DIFFA	31252	5971	1695	4314	14960	2665
DOSSO	544993	170038	1798	9996	448864	52401
MARADI	850612	628546	1758	2086	461374	208359
NIAMEY	8240	217	35	24	4968	779
TAHOUA	666778	351518	1342	4019	384911	42833
TILLABERI	440546	133600	1219	15926	286434	12551
ZINDER	619420	410988	1026	6580	547643	238100
NIGER	3161868	1700908	9410	42981	2149205	558453

Source: DS/MAG/EL

2. Main crops and their phenology

1. cereal crops:

- MILLET
 - SORGHUM
- Phenology: Germination/
three leaf stage, side shoot/tillering,
stem elongation, boot stage, flowering, milk stage,
dough stage and maturity

2. Leguminous crops

- COWPEA
- Phenology: Germination, leaf stage,
vegetative growth, flowering, pod
formation, pod filling and ripening

3. Oil crops

- GROUND NUTS
- Phenology: Germination, leaf
development, formation of side shoot,
stem elongation (crop cover), inflorescence, flowering,
development of fruit and seed, ripening of seed

3. Agricultural projects related to remote sensing

❖ **Niger- Morocco technical cooperation** : capacity building at (CRASTE-LF_ Morocco

- ❑ Crop production , **fodder estimation** and monitoring small water bodies through remote sensing
- ❑ Training on drone technologies for agricultural survey



3. Agricultural projects related to remote sensing

❖ AGRHYMET REGIONAL CENTER

Capacity building using SARRA_ H/O MODEL to estimate crop yield

SARRA: Système d'Analyse Régionale des Risques Agroclimatologiques
Millet, Sorghum, Maize and rainfed Rice

<https://sarra-h.teledetection.fr/>

❖ African risk view (ARV) of ARC to monitor drought



4. Current problems in agriculture development

- ❖ Un even rainfall distribution : over a third of the country has inadequate rainfall, and agriculture is concentrated in the southern and southwestern border areas.
- ❖ Crops planted during the rainy season have their productivity dependent on rainfall.
- ❖ Irregular rainfall and inadequate soil and crop management techniques contribute to poor yields and high annual variability in production

5. Requirements and expectation, in agriculture development

- ❖ Understanding of the climate and, in particular, the variability in the amount and distribution of rainfall
- ❖ Shifting from rainfed agriculture to irrigated crop production
- ❖ Financing the country agricultural transformation

THANK YOU FOR YOUR ATTENTION