ANALYSIS OF AGROS-SMART SURVEY DATA FOR THE ASSESSMENT OF SMALL FARMERS’ NEEDS FOR CLIMATE SMART AGRICULTURE IMPLEMENTATION

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About me

**PhD Bioengineer** Observer to the Conferences of the Parties since 2015. Member of the Italian Society of Climate Sciences (ISCI), active in various environmental organizations and networks (The Climate Reality Project) and an active participant in UN YOUNGO, the constituent of young people within the Framework Convention of Nations United in which take part on various working groups (Energy, Health, and Agriculture). Member of GACSA and Italian Focal Point of GCSAYN, promoter of the blog on YouTube channel Hubg3w Italia for dissemination on international negotiations and organizer of the Climate Change Symposia and Climate Social Forums.

**AREAS OF INTEREST**

- Climate Change
- Climate Smart Agriculture
- ICT 4 DEV
- Data Mining & ML
- One Health

AGROS-SMART PROJECT

With **AGROS-SMART** we want support small holder farmers in better adapt crop management to the effects of climate change, offering a platform to exchange best practices and ideas and to build farmer resilience by applying the principle of CSA
AGROS-SMART PRELIMINARY SURVEY

We started to achieve this goal properly trying to assess small farmer knowledge and needs for CSA implementation through a survey that we provided to farmers all over the world by online dissemination.

From June 2019 to Jan 2023
- 100 responses
- from 38 different countries
- Category who responded
  - Traditional Farmers
  - Organic Farmer
  - Consumer
  - Market person
  - Activist/Volunteer

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Structure of the survey

SECTION 1: Preliminary Inquiry, country region etc...

SECTION 2: Cropping and farming : Part 1 General Info about cropping styles, habits

SECTION 3: Information and Connectivity about access to connectivity and internet

SECTION 4: Market and Selling about access to market, opportunity and challenges and selling strategies

SECTION 5 Cropping and farming : Part 2 Climate Change Impact general perception of climate change impact and knowledge of CSA

SECTION 6: Final Remarks final feedbacks after compiling the survey

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WORLD WIDE DISTRIBUTION OF RESPONSES
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SEC 1- TARGET GROUPS DISTRIBUTION

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Sec 2 - YARDS DIMENSION

2.2. If you are involving in farming activities, how much large is the cropping area of your production?

100 responses

Most of the respondent (63%) has been Small-holders Farmers (less than one hectare to 10 hectares standing to FAO)

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Sec 2 - Targets of the production

2.7. Who do you support with your farming activity?
- Only myself: 55.2%
- Me and my husband/wife: 16.4%
- Me, my husband/wife and my children: 12.5%
- My community: 8.4%
- Family: 1.3%
- My parents and siblings: 0.6%
- Me + three persons helping: 0.6%
- Needy farming with minimum labour: 0.6%

Mostly of the participants do self-sustaining community based agriculture.

2.8. How many members your family/community are supported by your farming activity?
- 1 to 5: 43%
- 6 to 10: 25%
- More than 10: 12%

Sec 2 - Seasonality and production

2.10. In which months particularly do you usually have production?
- January: 23 (24.2%)
- February: 18 (19.8%)
- March: 21 (22.5%)
- April: 26 (27.4%)
- May: 41 (43.2%)
- June: 37 (39.5%)
- July: 36 (37.8%)
- August: 30 (31.6%)
- September: 24 (25.9%)
- October: 28 (29.5%)
- November: 29 (31.3%)
- December: 24 (25.9%)

Most productivity recur in summer season and between June and October.

2.18. In which season do you usually have the highest production?
- Winter: 29 (30.3%)
- Spring: 28 (29.5%)
- Summer: 25 (26.5%)
- Autumn: 30 (31.3%)

Sec 2 - Technology in agriculture

2.21. Do you use pesticides in your cropping activity?
- Yes: 33.3%
- No: 66.7%

2.22. Do you use mechanization in your cropping activity?
- Yes: 16.2%
- No: 83.8%

2.23. Do you use ICTs in your cropping activity?
- Yes: 15.6%
- No: 84.4%

At the current state most of the farmers use pesticides in their activity, use mechanization, but barely use ICTs in their activity.

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Sec 3 - Type of Cell phone

3.1 Do you have a cell phone?
100 responses
- Yes: 100%
- No: 0%

3.2 If yes which type?
- Mobile cell phone: 85%
- Smartphone: 15%

3.4 Which of these functionalities are using and with which frequency?
- SMS: 60%
- Call: 50%
- Data: 40%
- Internet: 30%
- Email: 20%
- Games/Properities other: 10%
- Call: 10%

All participants have a phone and mostly have a smartphone. Smartphone is mostly used for SMS and email.

Sec 3 - Access and use of internet

3.6 Do you have access to internet?
99 responses
- Yes: 90%
- No: 10%

3.8 If yes, how many times in a day?
95 responses
- 1: 30%
- 2: 20%
- More than 3: 40%
- More than 10: 10%
- More than 25: 0%

Most of the participants have access to internet and use between 5 and 10 hours for more than 5 times a day.

Survey also says that they access to internet from cafe but on payment
in 2023

Sec 3 - Sources of information

3.11 In general, how do you get your information on cropping and farming?
98 responses
- Experience: 92 (93.8%)
- Traditional knowledge: 54 (55.1%)
- Ask to friends: 41 (41.8%)
- Internet: 14 (14.3%)
- SMS: 6 (6.1%)
- Public discussions/forums: 11 (11.2%)
- Seminar: 44 (44.9%)
- Webinar: 11 (11.2%)
- Peer to peerexchange with others: 56 (57.1%)
- Others: 11 (11.2%)

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Sec 5 - Knowledge about climate change

5.1 In your opinion what can be a definition of Climate Change?
97 responses

- the change in the soil and water conditions
- the change of weather conditions
- extreme events frequency caused by global warming
- climate change does not exist

The majority have a quite knowledge on the concept of climate change

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Sec 5 - Knowledge about climate change (effects)

- Farming is one cause of climate change if we are planning poor, with a lot of pesticides is one of the agents of climate change
- Mostly drought
- Extreme rainfall, temperature, pest outbreaks, drought,
- Too much sun, drought, poor harvest, lack of water, poor plant development.
- Drought
- Climate change affects food production and processing
- Water shortages, flooding, droughts

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Sec 5 - Knowledge about Climate Smart Agriculture

5.3 Do you know about Climate Smart Agriculture?
100 responses

Roughly 74% know about Climate Smart Agriculture

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Knowledge about Climate Smart Agriculture (Techniques)

5.4 Which kind of practices of Climate Smart Agriculture do you practice in your opinion?

91 responses:

- Agroforestry: 57 (62.8%)
- Permaculture: 31 (34.1%)
- Enhanced crop irrigation: 24 (39.8%)
- Conservation agriculture: 40 (44%)
- Use of quality seeds: 48 (52.2%)
- Use of different animal species: 27 (29.7%)
- Use of genetically modified seeds: 24 (26.5%)
- Animal breeding: 14 (15.4%)
- Intercropping: 2 (2.2%)

Knowledge sharing

5.5 Do you share or have shared your practices with other farmers?

94 responses:

91% Yes, 9% No

5.6 Are you in any group, network or association of farmers?

92 responses:

77% Yes, 23% No

Knowledge sharing is a common practice among farmers

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Conclusions

- The survey has addressed especially small holder farmers across 38 countries.
- They mostly perform cereal cropping and most of the production is concentrated in summer.
- The type of agriculture is traditional, self-sustained, and communitarian, and organic farming is spread but not for the total.
- Agriculture is accompanied by technology by mostly pesticide and mechanization. ICT is now so used in agriculture.
- Access to smartphone and laptop as well internet has at least 3/4 coverage.
- Traditional and oral knowledge transmission is any case the prevalent source of information.

Climate Change Related Outputs

- Climate change and its effects are quite known among small farmers and also the concept of Climate Smart Agriculture, even with a less extent.
- Different Climate Smart Agriculture techniques are used even with a different perception of it, agroforestry and intercropping are considered the most adopted techniques of CSA.

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THANKS FOR YOUR ATTENTION

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