

Supplementary Materials



Project: Field Professionals

FARMERS SURVEY

Producer Profile

Name:

Property Location:

City:

Telephone:

Email:

Age.

- ☐ Under 25 years old.
- ☐ From 25 years old to 35 years old.
- ☐ From 36 years old to 45 years old.
- ☐ From 46 years old to 55 years old.
- ☐ From 56 years old to 65 years old.
- ☐ Over 65 years old.

Sex.

- ☐ Female ☐ Male

Marital status.

- ☐ Single. ☐ Married.
- ☐ Divorced.
- ☐ Widower.

Level of education.

- ☐ Incomplete primary education.
- ☐ Complete elementary school.
- ☐ Incomplete high school.
- ☐ Complete high school.
- ☐ Agronomist Engineer.
- ☐ Veterinarian.
- ☐ Zootechnist.
- ☐ Forest Engineer.
- ☐ Graduate.
- ☐ Other higher education.

Q1. Do you use any type of rural credit for activities on the property?

- ☐ Yes ☐ No

Q1.1. If the answer is yes, which agency or program do you use?

- ☐ Bank of Brazil (FCO, etc.).
- ☐ SICREDI.
- ☐ Negotiation locked. (Barter).
- ☐ ABC plan.
- ☐ Another option.

Q2. Have you received technical assistance from the following organizations?

- ☐ University.
- ☐ EMPAER.
- ☐ EMBRAPA.
- ☐ Association of producers (Aprosoja, etc.).
- ☐ Rural Union. ☐ SENAR. ☐ Non-governmental organizations NGOs.
- ☐ Private companies.
- ☐ I do not receive technical assistance.

Q2.1. If you receive technical assistance, what are the points that can be improved?

- ☐ Basic technical knowledge.
- ☐ New technologies and scientific discoveries.
- ☐ Understanding the cost benefit of the proposed technology.
- ☐ Communication skills.
- ☐ I do not receive technical assistance.
- ☐ Other: _____

Property Profile.

Q3. What cultivars do you manage on the property?

- ☐ Soy.
- ☐ Maize.
- ☐ Cotton.
- ☐ Pasture.
- ☐ Other: _____

Q4. How many years have you been working with agricultural production?

- ☐ 0 to 10 years.
- ☐ 11 to 19 years old.
- ☐ 20 to 29 years old.
- ☐ 30 to 39 years old.
- ☐ 40 to 50 years.
- ☐ > 50 years.

Q5. What is the total area (ha) of your rural property? (own and/or leased area)

- ☐ < 500 hectares.
- ☐ 500 to 1,499 hectares.
- ☐ 1,500 to 3,499 hectares.
- ☐ 3,500 to 9,999 hectares.
- ☐ > 10,000 hectares.

Q6. Do you reside on the property?

- ☐ Yes ☐ No

Q6.1. If you do not live on the property, how often do you visit?

- ☐ 1 to 3 times a week.
- ☐ > 3 times a week.
- ☐ 1 to 2 times a month.
- ☐ 2 to 4 times per semester.
- ☐ < 1 time per semester.

Q7. Who is/are responsible for technical decisions (planting time, variety, herbicides, insecticides, fungicides, production sales, agricultural operations, etc.) on the property?

- ☐ I make the decision myself.
- ☐ My spouse and I made the decision together.
- ☐ I make the decision together with my wife and children.
- ☐ A person (outside the family) and I make the decision together.
- ☐ A person outside the family makes the decision.

☐ Other: _____

Management Practices

Q8. The sanitary void is a tool used to avoid/reduce the fungus that causes Asian rust, between crops. Some discussions aim to extinguish the sanitary void, do you agree with this?

- ☐ Yes ☐ No

Q9. How many fungicide applications do you apply to soybeans to control Asian rust?

- ☐ 1 to 2 applications.
- ☐ 2 to 3 applications.
- ☐ 3 to 4 applications.
- ☐ From 4 to 5 applications.
- ☐ None.

Q10. Which invasive plants do you consider the most problematic on your property, by degree of importance (1, 2 and 3)?

- ☐ *Eleusine indica* (chicken foot grass).
- ☐ *Conyza bonariensis* (horseweed).
- ☐ *Spermacoce latifolia* (Hotgrass).
- ☐ *Digitaria insularis* (bitter grass).
- ☐ Other: _____

Q11. How many herbicide applications do you use to control bitter grass?

- ☐ 1 to 2 applications.
- ☐ 2 to 3 applications.
- ☐ 3 to 4 applications.
- ☐ From 4 to 5 applications.
- ☐ None.

Q12. Do you use pre-emergent herbicide?

- ☐ Yes ☐ No

Q12.1. If yes, which herbicide?

Q13. Do you track the history of pests on your property?

- ☐ Yes ☐ No

Q14. What is the most problematic pest in the soybean crop? Rank in order of importance (1st, 2nd and 3rd).

Q15. How many insecticide applications do you carry out to control caterpillars in soybeans?

- ☐ 1 to 2 applications.
- ☐ 2 to 3 applications.
- ☐ 3 to 4 applications.
- ☐ From 4 to 5 applications.
- ☐ None.

Q16. Do you plant maize with *Bacillus thuringiensis* (Bt) Technology?

- ☐ Yes ☐ No

Q16.1. If so, what percentage planted?

- ☐ From 0 to 20%.
- ☐ From 21 to 40%.
- ☐ From 41 to 50%.
- ☐ From 51 to 60%.
- ☐ From 61 to 80%.
- ☐ From 81 to 100%.

Q17. What is the main pest of maize? Which insecticide do you apply to control?

Q18. Do you use seed treatment?

- ☐ Yes ☐ No

Q18.1. If yes, what type of treatment?

- ☐ Industrial seed treatment (TSI).
- ☐ Seed treatment carried out on the farm.
- ☐

Other: _____

Q19. Studies indicate that climate change affects the cultivation of annual crops. Do you agree?

- ☐ Yes, absolutely.
- ☐ Yes, maybe.
- ☐ No, not at all.
- ☐ No, maybe.
- ☐ I don't know how to answer.

Q20. Which agricultural production system is most used on your property?

- ☐ Monoculture or isolated production system.
- ☐ System in crop succession.
- ☐ System in crop rotation.
- ☐ System in intercropping of cultures.
- ☐ Integration system (e.g., crop-livestock).

Q21. Do you use cover crops?

- ☐ Yes ☐ No

Q21.1. If yes, which ones? (multiple selection)

- ☐ Mill.
- ☐ Styling.
- ☐ *Brachiaria ruzizienses*.
- ☐ Pigeon pea.
- ☐ Sunn hemp.
- ☐ Other: _____

Q22. Do you participate in any of the low carbon programs?

- ☐ Recovery of Degraded Pastures.
- ☐ Crop-Livestock-Forest Integration (CLFi) or Crop-Livestock Integration (CLi).
- ☐ Direct Planting System (DPS).
- ☐ Biological Nitrogen Fixation (BNF).
- ☐ BT Technology.
- ☐ None.

Q23. Choose three events that you consider important to learn about new technologies (new agricultural products, new seeds and different management practices for crops).

- ☐ Field days.
- ☐ Fairs and Exhibitions.
- ☐ Lectures.
- ☐ Congresses and Seminars.
- ☐ Nothing/None.
- ☐ I don't know.

Q24. If you participate in training, what are the sources?

- ☐ Regional Extension Educator (MT Foundation, IMA, SENAR-MT, etc.).
- ☐ Universities.
- ☐ State research companies (INDEA, EMPAER, etc.).
- ☐ Scientists from the federal government (MAPA, EMBRAPA, etc.).
- ☐ Chemical Companies (Pioneer, Monsanto, Bayer etc.).
- ☐ Scientists from the fertilizer company (Mosaic, Yara, etc.).
- ☐ Resale (Agroamazônia, Agroinsumos, etc.).
- ☐ Independent consultant.



☐ Other: _____

Q25. What topics are you interested in deepening your knowledge?

- ☐ Physical characterization of the soil.
- ☐ Soil conservation.
- ☐ Soil-plant atmosphere relationship.
- ☐ Soil preparation.
- ☐ Geo-technology and Precision Agriculture.
- ☐ Soil management and weed control.
- ☐ Mineral Nutrition of Plants.
- ☐ Acidity Correction.
- ☐ Plant Fertilization Management. ☐ Soil biology.
- ☐ Soil Fertility Assessment.
- ☐ Other: _____

Thank you very much for your cooperation!

Q26. "I am very optimistic about the future of agriculture in Brazil."

- ☐ I agree. ☐ I disagree.

Suggestions.

Q27. Do you have any suggestions for the Academics at the Federal University of Mato Grosso

Thick about training to be offered to producers? _____

Q28. Do you have any other comments to add? _____



Project: Field Professionals
PROFESSIONALS SURVEY

Professional Profile.

Name:

Company:

Office:

City:

Telephone:

Email: Age:

What is your schooling?

- ☐ Incomplete high school.
☐ Complete high school.
☐ Technical High School Diploma or GED.
☐ Graduation.
☐ Graduate.
☐ Other: _____

Customer Profile.

Q1. On average, how many producers do you serve?

- ☐ 0-19 Producers.
☐ 20-39 Producers.
☐ 40-60 Producers.
☐ > 60 Producers.

Q2. What is the total area (hectares) that you serve?

- ☐ 0 - 19,999 hectares.
☐ 20,000 - 39,999 hectares.
☐ 40,000 - 59,999 hectares.
☐ > 60,000 hectares.

Q3. What culture(s) do your customers work in? (Multiple choice).

- ☐ Soy.
☐ Maize.
☐ Cotton.
☐ Pasture.
☐ Others: _____

Section on customer recommendations. Q4.

How important are the following factors to you in relation to agronomic management and customer recommendations?

1. Important. 2. Little influential. 3. Not important.	1	2	3
Input costs.			
Economic viability.			
Operational management constraints such as time, human resources and equipment.			
Concerns about soil degradation and water quality.			
Technical assistance ranging from soil preparation to harvesting.			
Productivity in relation to economic return.			
Pollution of the environment due to the use of chemical pesticides.			
Public opinion on the use of pesticides in crops.			

Q5. How much do you agree with the statements about agricultural inputs and production.

1. Agree. 2. Neutral. 3. Disagree.	1	2	3
I feel safe selling the harvest on the futures market.			

I am concerned about the excess of chemical pesticides in the environment.			
The available budget limits the amount of products my customers use most years.			
I find the recommendations of the Universities, about high inputs.			
I believe that the Earth's climate is changing.			
I am bothered by people's opinion regarding the use of chemical products by producers.			

Q6. How likely are you to use the following resources to find management information and agronomic recommendations? (Choose one answer for each resource).

1.Probable. 2.Unlikely. 3.No likelihood.	1	2	3
Social media (Twitter, Facebook, blogs, YouTube, etc...)			
Apps (WhatsApp, WeChat, etc...)			
3-5 minute online video from an expert.			
Online video demonstrating on-site management practices.			
Online course.			
Participate in webinar.			
Attend expert lecture.			
Field practices with small groups.			
Website search.			
Watch or listen to podcasts.			
Chat with a friend or neighbor.			

Q7. What is the ideal workload to participate in an agronomic management course?

- ☐ 1 to 4 hours.
☐ 8 hours.
☐ More than 8 hours.
☐ I don't know how to tell.

Professional training.

Q8. How often do you read technical articles in specialized magazines or journals? ☐ Daily.

- ☐ Weekly.
☐ Monthly.
☐ Occasionally.
☐ I don't read technical articles in specialized magazines or journals.

Q9. How many books on agricultural sciences (agronomy and related areas) do you read per year?

- ☐ None.
☐ 1 to 2 books.
☐ 3 to 5 books.
☐ > 5 books.

10. What is the best day(s) and time(s) to participate, in person, in a training program on agronomic topics (soil, plant science, plant nutrition and others)? (Multiple choice).

Period	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Morning.							
Afternoon.							
Evening.							

Q11. How many hours would you have available to do online training on agronomic management (webinar, podcast)?

- ☐ Up to 1 hour.
☐ 1 to 3 hours.
☐ 4 hours.
☐ I am not interested in participating in an online program.

Q12. How long are you willing to travel to participate in face-to-face agronomic training? (Check the maximum amount of time you are willing to travel based on the duration of the training).

Duration of training	½ to 1 hour.	1 to 3 hours.	More than 3 hours.	Not available.
Up to 1 hour				
1 to 3 hours				
4 hours				
A whole day				
More than a full day				

Q13. How likely are you to participate in a face-to-face or online training program in the coming months? (Check one for each month).

Period	J	F	M	A	M	J	J	A	S	O	N	D
Morning												
Afternoon												
Evening												

Q14. How many trainings do you attend per year?

- ☐ None.
☐ 1-3 per year.
☐ 4-5 per year.
☐ > 5 per year.

Q14.1. If you participate in training, who provides the training?

- ☐ Regional Extension Educator (SENAR-MT, Fund MT, IMA, etc...)
☐ Universities (UFMT, UNEMAT, USP, etc...)
☐ State companies (EMPAER, etc...).

☐ Scientists from the federal government (EMBRAPA, etc...).

☐ Chemical Companies (Bayer, UPL, Syngenta, etc...).

☐ Fertilizer companies (Mosaic, Yara, etc...).

☐ Resale (Agroamazônia, Agroinsumos, etc...).

☐ Independent consultants.

☐ Others.

Q17. Choose the main topics that are of interest to you.

☐ Physical characterization of the soil.

☐ Soil conservation.

☐ Soil-plant atmosphere relationship.

☐ Soil preparation.

☐ Geotechnology and Precision Agriculture.

☐ Soil management and weed control.

☐ Mineral Nutrition of Plants.

☐ Acidity Correction.

☐ Plant Fertilization Management.

☐ Soil biology.

☐ Soil Fertility Assessment.

☐ Pest management

☐ Other(s)

18. "I am very optimistic about the future of agricultural activity in Brazil."

☐ Agree ☐ Disagree

Suggestions

Q19. 1. Do you have any suggestions for Professors at the Federal University of Mato Grosso on training topics to be offered to producers?

20. Do you have any other comments to add? Thank you very much for your cooperation!
