Knowledge Transfer Conference 2018
Shaping the Agricultural Knowledge and Innovation System – Through the eyes of the Next Generation

Masters in Agricultural Innovation Support (MAIS)

Study title: Using Nutrient Management Plans (NMP's) to deliver soil fertility advice

Student: Amy Connolly

Supervisors: Anne Markey – UCD
              Pat Murphy – Teagasc

Office location: Moorepark Advisory Office

Study Rationale

- Food Harvest 2020 & Food Wise 2025 both identified nutrient management as an area which needs to be improved

- Doherty, 2015 and Ryan, 2016 completed pieces of work relating to NMP online. The problem now is we have the tool (NMP online), how do we get the best out of it?

Research Questions

Farmer

1. How good is their understanding of a NMP?

2. Are there things in NMP's they could use but don't understand?

3. What would help them understand their NMP's?

4. How could it be presented in a way farmers understand more?

5. What will it take to make farmers take it seriously?

6. Do different farmer types have different needs, understanding etc of NMPs?

7. Can farmers be engaged through using the system themselves?

8. Should farmers have access to their NMP at critical decision points? i.e. purchasing fertiliser
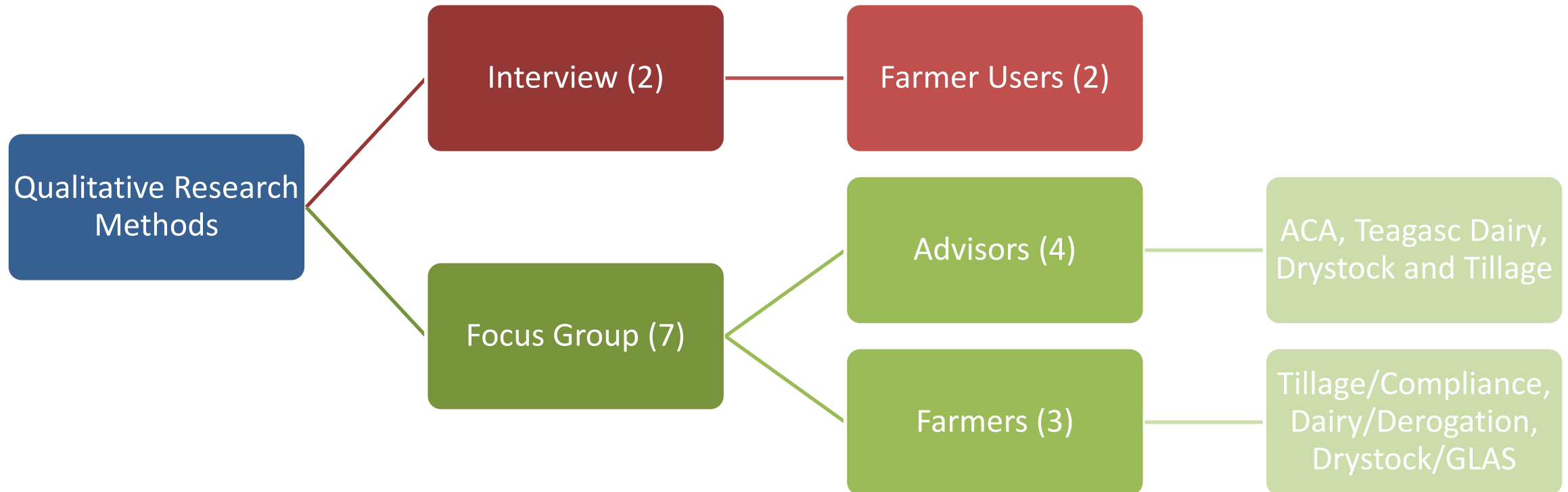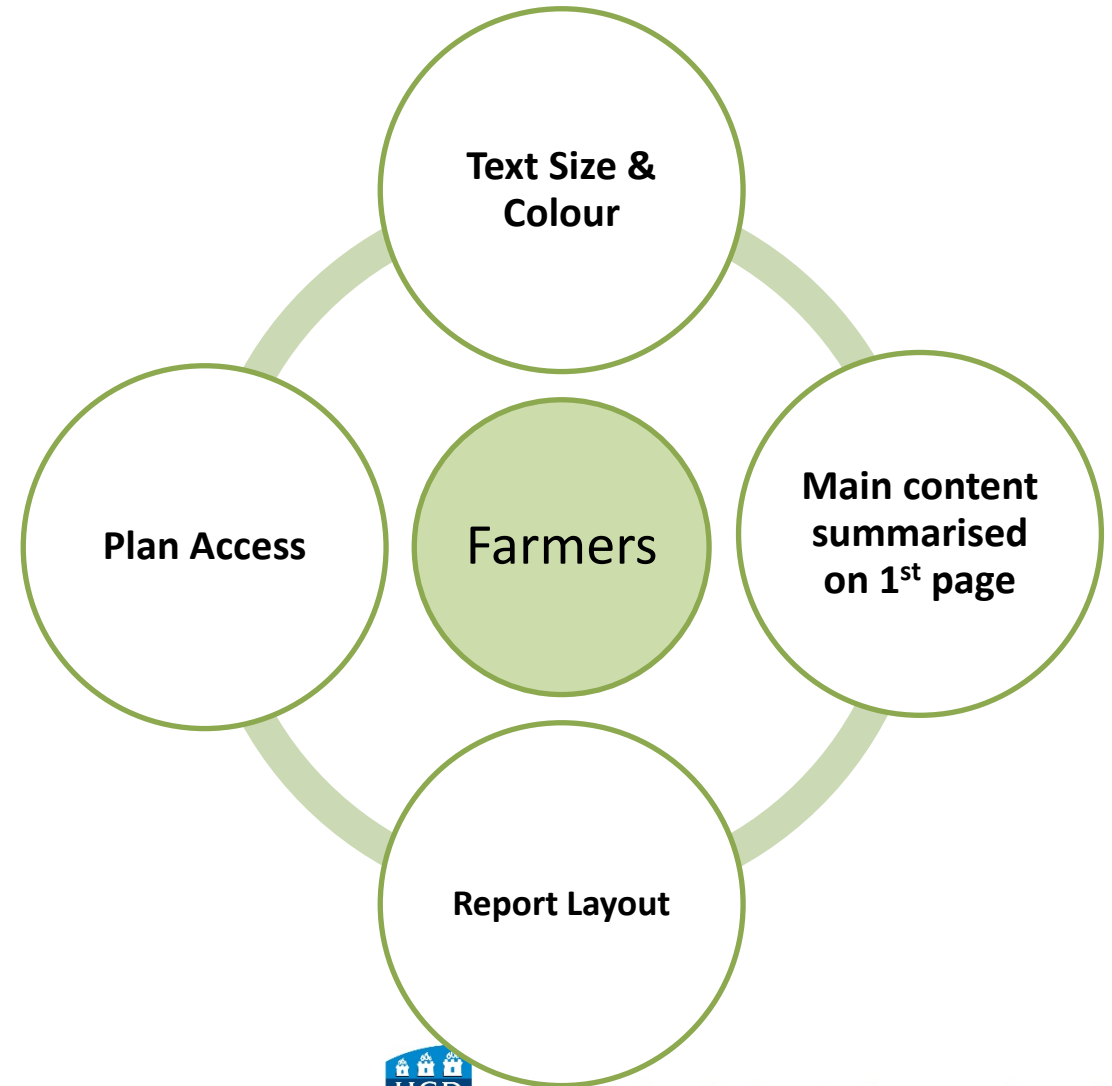
Focus Groups

Interview

Advisor

1. What are advisors attitudes and opinions towards NMP Online?

2. What improvements can be made to the Nutrient Management Planning process to increase its usage and implementation?

3. What communication tools are needed by advisors and the system to increase usage of NMP's?

Focus Groups

Study Method and Population

Key Findings

Fertiliser plan for the Farm

Manure Allocations

Fertiliser	Estimated T	Applied T	Balance T
Cattle Slurry	0	0	0
Pig Slurry	400	417	0
Total P in Manures (Grazing + Non-Grazing 0.0)			320

Planned Fertilisers

Fertiliser	Tonnes
Urea + S (40%N, 6%S)	1.74
Beet Comp 3 (8-5-18)	4.60
0-7-30	3.20
CAN +S(27%N)	11.91
10-10-20	10.70

Nutrient Balance

	N(kg)	P(kg)	K(kg)
Chemical Recommended	5,378	1,704 (100%)	2,441
Max Chemical Allowed	5,378	1,830	
Chemical Usage	5,348	1,524	3,929

Plot	Crop	Area(Ha)	Soil Sample	Index N|P|K	Nutrients Applied (Units/Acre) N|P|K	Nutrients Advice (Units/Acre) N|P|K	Organic Manures Pig Slurry (Gals/Acre)	Urea +S (40%N, 6%S) (Bags/Acre)	Beet Comp 3 (8-5-18) (Bags/Acre)	0-7-30 (Bags/Acre)	CAN +S(27%N) (Bags/Acre)	10-10-20 (Bags/Acre)
Plot 2	Winter Wheat (Feed)	1.3	2	1|2|3	186 35 90	191 40 73	1500.0	1.5	0.0	0.0	2.5	3.0
Plot 3	Winter Wheat (Feed)	1.8	3	1|2|3	186 35 90	191 40 73	1500.0	1.5	0.0	0.0	2.5	3.0
Plot 4	Spring Barley	3.9	4	1|2|4	108 0 0	109 28 0	0.0	0.0	0.0	0.0	4.0	0.0
Plot 5B	Winter Barley	1.8	5	1|1|3	133|42 |110	156 44 69	2000.0	1.5	0.0	0.0	0.0	3.5
Plot 5A	Winter Barley	3.3	5	2|1|3	133 42 110	135 44 69	2000.0	1.5	0.0	0.0	0.0	3.5
Plot 6	Spring Oats	2.0	6	1|2|2	100|42 |110	101|31 |89	2000.0	0.0	0.0	0.0	1.0	3.5
Plot 1A	Spring Barley (Malting)	8.0	1A	1|2|3	139 27 80	135 30 61	2000.0	0.0	0.0	0.0	3.0	2.0
Plot 7A	Field Beans	5.0	7	1|2|2	0 |35 |150	0 |32 |49	0.0	0.0	0.0	5.0	0.0	0.0
Plot 7B	Winter Wheat (Feed)	1.2	7	1|2|2	187 42 110	191 40 85	2000.0	1.5	0.0	0.0	2.0	3.5
Plot 1B	Spring Barley (Malting)	4.3	1B	1|1|3	130|35 |70	135|38 |61	0.0	0.0	0.0	0.0	3.5	3.5
Plot 8B	Spring Barley	1.1	8	1|1|3	116 35 70	109 36 61	0.0	0.0	0.0	0.0	3.0	3.5
Plot 7C	Field Beans	0.2	7	1|2|2	0 |35 |150	0 |32 |49	0.0	0.0	0.0	5.0	0.0	0.0
Plot 8A	Spring Barley	3.9	8	1|1|3	116 35 70	109 36 61	0.0	0.0	0.0	0.0	3.0	3.5

UCD School of Agriculture and Food Science

Implications for AKIS

- If we improve the system, we should improve NMP's produced and nutrient management overall

- Proposals for NMP Online system development

Thank you for listening