

Triple Axe Testing Phase

Summary Report

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&

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Summary

The Triple Axe approach

The Triple Axe advice model gets specialist advisers and the farmer to sit at the same table to discuss a truly integrated and sustainable action plan for the farm's future. These discussions and specialist reports will provide the knowledge necessary for FWAG to create a Farm Resilience Plan. The plan will lay out how to achieve the farmer's goals, become compliant to regulations, remain or become financially viable and reduce the environmental impact of the farm.

Purpose of this report

This report summarises the delivery and key findings from the 2022-2023 Triple Axe Testing Phase. This year, we made adjustments to the Triple Axe advice process based on recommendations from the Pilot. We evaluate how those adjustments have improved the advice and make suggestions for future fine-tuning.

Project outputs

- 4 Farm Resilience Plans with input from 3-4 specialist advisers for each farm
- 2 further farms started the process but dropped out before specialist advice was due to be given
- Feedback was gathered from last year's participating farmers
- Feedback was gathered from this year's farmers who dropped out
- Survey to gather information on farmer interest for Triple Axe style advice in the catchment
- Suggestions for future fine-tuning of delivery

Improvements to the advice process

- Successful inclusion of social/emotional aspects and farmer goals
- Better choice of specialist advisers to provide targeted and tailored advice to suit the farm's goals whilst aligning with the project's aims and the environmental issues in the Axe catchment
- Discussions were more in-depth, streamlined and productive than last year
- Small efficiency gains were made this year but still more time and budget is required

Suggestions for future fine-tuning and delivery

- Secure longer-term funding to ensure more appropriate timeframe and budget for improved delivery. This would allow:
 - not rushing participating farmers
 - helping farmers with implementing the recommendations
 - ongoing monitoring of whether the changes are achieving the intended results (financial and environmental). Resilience is an on-going process. Workshops and discussion groups can also help with this.
 - advice on adjusting on-going implementation based on the results from monitoring
- Gather feedback from farmers with a survey and a farmer meeting
- Gather feedback from specialist advisers
- Run a set of workshops to prepare farmers but also to sign up interested farmers. We have suggested workshop content in this report, such as farmer speakers talking about their experience with Triple Axe

Suggestions for wider support

- Clear interpretations of the Farming Rules for Water and continuing regulatory presence in the catchment
- Building responsibility across the wider agricultural industry, such as improved FACTS accreditation, feed merchants disclosing nutrients in feed, livestock nutritionists advising on low P diets and milk buyers putting more focus on P issues
- Agri-environment scheme payments beyond income foregone

Note of thanks

We would like to thank the funders, participating farmers and specialist advisers.

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Triple Axe Testing Phase – successful building on lessons learnt and further suggestions for future fine-tuning

This section lays out:

- What we suggested in the final report from last years' Pilot (2021-2022) to improve the Triple Axe advice model
- How we have implemented this in this year's Testing Phase (2022-2023)
- How this year's implementation has worked and what could be done to further fine-tune the process
- Suggestions for further delivery based on the two years' experience with trialling and fine-tuning the advice model

Successful inclusion of emotional/social decision making

Pilot Phase (2021-2022) Suggestions

- Include the social/emotional aspects in the Triple Axe advice model. Evaluation of the pilot phase found that the Triple Axe process worked best on the farm where the farmer had a clear vision to which we could tailor the specialist advice and streamlined discussions.
- Wider research on top-performing farmers also identified that clear goal setting and planning was an indicator of farm business success.

Testing Phase Implementation Strategy (2022-2023)

This year, to address the social and emotional aspects, FWAG worked with participating farmers on the green actions to 'define background & mission' (see figure one).

The brown actions 'identifying levers' were carried out by specialist advisers. The blue section 'refine mission & plan' was the round-table discussion between farmers, the specialist advisers and FWAG. Following this, some specialists were asked to provide follow up advice addressing things that came up during the discussion and FWAG amalgamated the advice in form of the Farm Resilience Plans.

The overleaf diagram is the amalgamation of wider work delivered by FWAG throughout the past few years:

- Outcomes of the Triple Axe Pilot
- Learnings from 40 business reviews
- Wider literature
- Spoke to out trustee and colleague farmers
- Discussions with regenerative farmers at Groundswell
- holistic management course with [Holistic Management International](#)
- Internal FWAG discussions regarding adviser experience
- Psychology literature

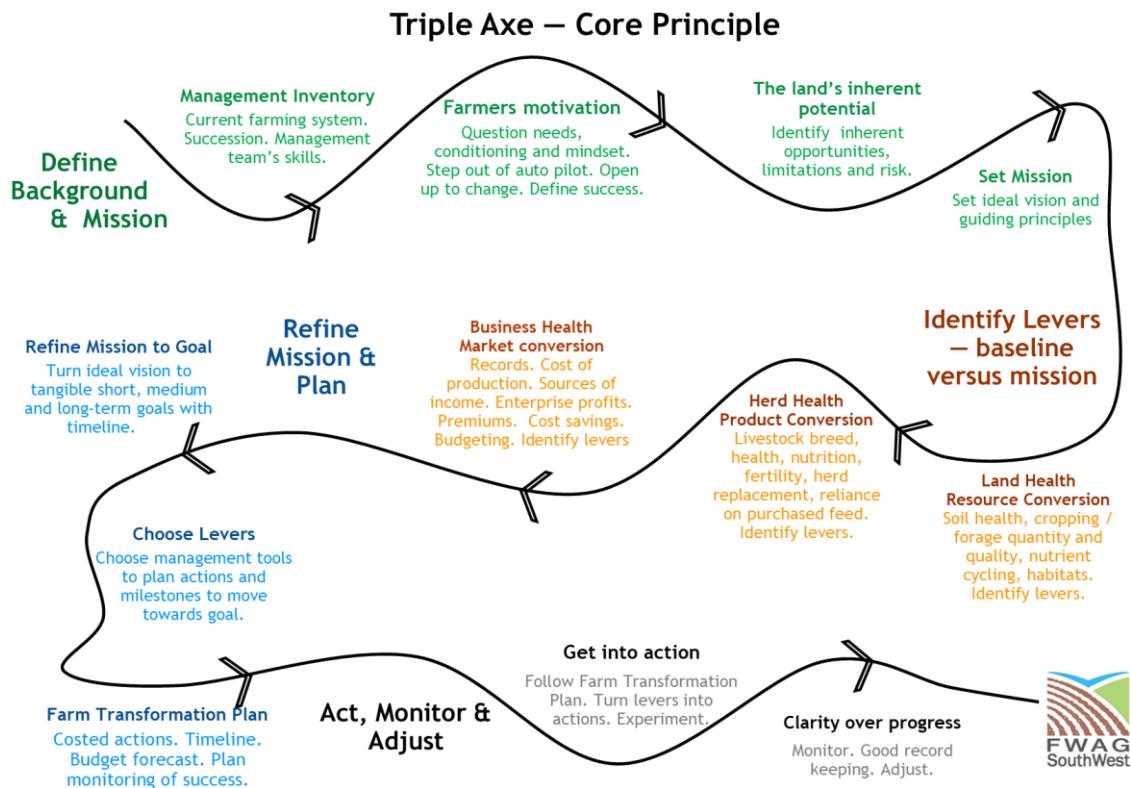


Figure 1 The Triple Axe core principle flow diagram

Evaluation Testing Phase Implementation Strategy

Including farmers' values and goals has significantly improved this year's delivery of the Triple Axe advice model. It has:

- Helped farmers pinpoint what they would like to get out of the advice and therefore have more buy in into the process.
- Enabled more suitable allocation of specialist advisers to farmers.
- Allowed us to tailor the specialist advice to each farm-specific situation and goal by providing the specialist advisers specific questions to explore in addition to the generic tasks we gave them to keep it consistent between farms.
- FWAG provided specialist advisers an in-depth farm information document including farmer goals and values. This gave advisers a better feel for the farm before their visit, enabling more effective advice in the time allocated (we had this as verbal feedback from specialist advisers).
- Improved the depth of round-table discussions to achieve clearer outputs.

Suggestions for future delivery

- Gather farmer feedback on the inclusion of social/emotional issues and how this could be further improved.
- When gathering farmer feedback, include questions around whether the specialist advice has had an impact on their values / goals.
- Obtain farmer feedback regarding the format, content and usefulness of the Farm Resilience Plan.

- Gather specialist adviser feedback on the inclusion of social/emotional issues and how this could be further improved.
- If farmer feedback suggests this would be useful, run farmer workshops on questioning values, circle of control and concern, goal setting etc.

Improved choice of specialist advisers and focus of advice

Pilot Phase (2021-2022) Suggestions

- Improve the choice of specialist advisers. Evaluation of the pilot phase found that some of the specialist advisers were not as open to questioning farm systems or not as on board with the way Triple Axe wants to approach advice and set ambitions for change.
- More specifically, maximising milk from home-grown forage/grazing was identified in the wider research as one indicator for successful dairy farms. However, few specialist advisers focused enough time on this important aspect and gave little practical advice on how to achieve this.

Testing Phase Implementation Strategy (2022-2023)

- We worked with specialist advisers who are experienced with delivering transformation on farms. Some of these specialists are more expensive than others, probably because they don't cover any of their day rates by selling feed/fertiliser/chemicals, but also because they have proven their worth to farmers and bring case studies that would be very useful for farmers to hear.
- Some of this year's specialist advisers brought case studies showing their advice can achieve positive results for the farm business and the environment. For example, how to achieve high forage dry matter yields and reduce reliance on bought-in feed and fertiliser.
- We trialled a novel approach for farm business advice (for 3 farms) by using Nethergill Associates and their farm business model which calculates 'Maximum Sustainable Output' (MSO). This model is based on the following: In farm business, it is widely assumed that higher production levels will improve farm profitability, but this overlooks the critical role of the environment in supporting a farm business. As a result, nature has often been viewed as an additional burden to be managed rather than integrated into the farming system. The environment is supporting a farm business by providing free issue energy from sunlight to every ha of land, which is converted into energy for production. For example, energy from sunlight is captured in grass growth, which is taken up by livestock and thereby converted into meat and/or milk. To increase meat/milk production further, farms use manufactured energy such as buying in fertiliser to boost grass growth and/or buying in feed. There is a level of agricultural output, beyond which the input costs are higher than the income this output generates, and this point is MSO. To identify the MSO, the traditional approach of reviewing financial data to produce a set of management accounts, including all variable and fixed costs is undergone. However, variable costs are split into Productive Variable Costs (PVCs): the 'free issue' energy nature offers, derived from sunlight and Corrective Variable Costs (CVCs): artificial substitutes, such as fertiliser and feed, where energy is bought. The output of this model then suggests how output per farm should be adjusted in order to meet MSO.
- We have sent the Farm Resilience Plans to all specialist advisers.

Evaluation Testing Phase Implementation Strategy

Our choice of specialist advisers significantly improved the delivery this year. Overall, this years' specialist advisers have:

- Tailored their advice better to each farm's situation.
- Given clearer advice on actions, how to carry them out and likely cost savings.
- Engaged in more in-depth round-table discussions focused on fine-tuning the direction rather than the specialisms staying quite separate like it was last year.

- Provided advice which was in line with the projects overall focus of reducing P loading and wider environmental benefits.
- The infrastructure, soil nutrients, livestock nutrition, livestock and land management advisers provided a better format and quality of specialist advice reports, which has improved the process of pulling specialist advice together in the Farm Resilience Plans.
- Helped farmers with pinpointing what they would like to get out of the advice and therefore have more buy in into the process.
- Allowed us to tailor the specialist advice to each farm-specific situation and goal by asking the specialist advisers specific questions, in addition to the generic tasks, to keep it consistent between farms.

Had a better understanding of the farm information and the farmer's goals and values before advising the farmer. Using MSO calculations with Nethergill Associates provided valuable insight. The benefits of using the model were that it:

- Set the scene and gave direction for the round-table discussions by providing a framework for the idea that financial improvement can work, in fact work best, by making the environment a shareholder in the business.
- Opened the farmers and specialist advisers to change.
- Provided food for discussions, not only specific to the farm but also everyone's understanding of farming businesses and how past policies and economic influences have shaped the conventional farm business thinking. Such questioning across the industry is valuable.
- Was well received by the farmers, which had been a concern before assigning Nethergill Associates to farmers due to the novel approach used. Either the model was quickly accepted as it was or raised many questions of how calculations were made or how the output would change in a different financial year etc. We believe that both acceptance and scepticism of the model achieved exactly what the model and our decision on including the model set out to do: setting a different scene, opening up a mindset for change, provide a framework for focussed discussion.
- Provided direction for all specialist advice. Either the direction was to reduce outputs to reach MSO (2 farms) or providing suggestions as to why the farm (1 farm) was at MSO and how it could further fine-tune outputs and inputs. A few drawbacks (admittedly outweighed by its benefits) of the model for us are:
 - It does not provide suggestions on how to achieve the approaching of MSO. To an extent, the other specialist advisers could fill that gap with their recommendations. We have had verbal feedback so far from farmers and specialist advisers that it would be useful to include a set of scenarios and key performance indicators (KPIs) of how MSO could be achieved. For example, it could be by reducing cow numbers (by how much), or by reducing milk yield per cow (by how much), or by increasing the farm size (by how much) to have more 'free issue energy', or by using techniques for how the 'free issue' energy could be better harnessed through better grass (or diverse sward) and grazing management.
 - Implies that MSO means an optimum for nature on the farm but without giving definitions of what that might look like and/or how to monitor it.

Suggestions for future delivery

- Gather feedback from farmers on the usefulness of the specialist advice and the way it was presented in the specialist reports and Farm Resilience Plans.

- Gather feedback from specialist advisers on:
 1. How they thought the team of specialist advisers worked and what could be improved.
 2. Whether they felt the specialist advice had been integrated successfully in the Farm Resilience Plan's recommendations. Funding will be required to gather this feedback from the farmers.
- MSO farm business advice could be further improved by:
 1. Drilling down into business figures a bit more and provide clear key performance indicators (KPIs) to look at and/or keep monitoring going forward.
 2. Providing case studies for different farm types on what steps were taken on a farm in order to achieve MSO and what reaching MSO means for profit, but also for important environmental KPIs. We suggest that this should be a future project:
 - How could regulatory compliance be included in MSO? For example, investing in infrastructure for SSAFO compliance would increase costs. We discussed that infrastructure investments look unfavourable in a 'profit and loss' business thinking (which most farmers apply), but positive when looking at balance sheets (which many farms do not carry out).
 - How can making space for nature, beyond making the most of the free issue energy be included in the model? To solve our biodiversity issues, we likely have to aim for well below MSO for some farms. Taking out land from production, in the current model, would reduce the free issue and therefore move a farm further away from MSO. What is the MSO for a farm which successfully produces agricultural outputs on priority habitats such as species-rich grasslands or a re-naturalised floodplain which can only be grazed temporarily if at all? Nethergill Associates suggested that farmers should be paid for environmental delivery as income foregone compared to MSO (which would often be a higher payment than if the income foregone was set on the current business income). This sounds like a very sensible approach. What would that mean for a few example farms?
 - Would moving to MSO mean reducing excess nutrients or in fact reaching nutrient neutrality?
 - What does meeting MSO mean for carbon footprints?
- Resilience is an on-going process: The advice output in the Farm Resilience Plans should not be seen as a set of actions to follow which will forever resolve all the farm's challenges. Positive change is best achieved by slowly introducing small changes over time, combined with constant monitoring of how that change is working and constant adjustment towards the farm's specific goal. After all, every farm is different and therefore the specifics of how an action, for example introducing herbal leys, will be slightly different to how another farm achieved positive results. Therefore, there should be an option to work with farmers long-term and provide specialist adviser time as and when it is needed and a review of the effect of changes after x time. For example, herbal leys are often tried once and then dismissed if it was not successful. With ongoing advice, the method of establishment and management of such herbal leys could be improved to eventually achieve a system which works for the farm and ensures the long-term delivery of environmental benefits.

Not enough time and budget

Pilot Phase Suggestions (2021-2022)

- One of last year's suggestions was that more time and budget is required to do the Triple Axe process justice.
- FWAG went considerably over budget to deliver the Pilot especially writing the final report and evaluating how the process had worked and suggesting what could be improved.
- It was not possible within the timescale and budget to collect farmer and specialist adviser feedback.
- It was not possible within the timescale and budget to ask specialist advisers to fine-tune their recommendations based on what the outcomes of the round-table discussions were.

Testing Phase Implementation Strategy (2022-2023)

- We aimed for working with 6 farmers on a one-to-one basis and focusing on improving the advice model, based on the findings from the Pilot.
- Unfortunately, 2 farmers dropped out during the process. When asked for feedback on why they were dropping out they said:
 - They think the process and advice could be of use for the farm
 - The project was explained clearly
 - Lack of time and reluctance to share details of the farm business were given as reasons for dropping out
 - One farmer felt uncomfortable discussing the project with family members / business partners, as succession and responsibility was not clear on that farm. The farmer who wanted to take part was overruled by the business partner.
 - They were generally interested in making changes to the farming system
 - No previous whole farm planning carried out
 - They would reconsider taking part in the future if
 - Workshops first and then specialist advice but want to choose specialist advice
 - Once the management structure of the farm is resolved
- Half of last year's participants found the process too rushed and half thought it was good to get it done quickly.

Evaluation of Testing Phase Implementation Strategy

- The timeframe was only slightly longer than last year and still not ideal. A lot of time went into trying to obtain farmer contacts and cold calling. This approach is not good value for time and effort as can result in hesitance and mistrust in the process, and the farmer under-valuing the offer.
- The budget was the same as last year and still not ideal, as was difficult to include specialist adviser follow-up work post round table discussion. This mainly relied upon the adviser's good will which is not a sustainable approach.
- We acknowledge that the limitations of time and funding were set by the funders for reasons out of their control.

Suggestions for future delivery

- Long-term funding over several financial years to allow time and budget for:
 - flexibility of whether to have the advice in a tight block (as half of last year's participants said) or whether to spread it out
 - follow-up work from the round-table discussions
 - helping farmers with implementing the recommendations

- ongoing monitoring of whether the changes are achieving the intended results (financial and environmental). Workshops and discussion groups can also help with this (see next point).
- advice on adjusting on-going implementation based on the results from the monitoring.
- Run workshops on specific topics in preparation for the Triple Axe process and to recruit participating farmers. One of last year's participating farmers said that preparatory workshops would have been useful to prepare for the depth of what was then covered. Such workshops could also help with ongoing monitoring on farms. Suggestions for workshops are:
 - How to use plate meters and programmes like AgriNet for grazing management.
 - How to keep financial records for business accounting, balance sheets, budgeting, cash flow assessments, splitting by enterprise
 - How to do nutrient management planning and what programmes to use
 - How to do soil structure and biology assessments on farms
 - How to carry out practical biodiversity assessments on farms

Feedback from participating farmers

Pilot Phase Suggestions (2021-2022)

- Gather feedback from the participating farmers.

Testing Phase Implementation Strategy (2022-2023)

- We carried out a survey with those who participated last year. Please see the attached output of that survey.

Evaluation of Testing Phase Implementation Strategy

Gathering the feedback was helpful and highlighted the extent of advisory needs, different ideas on what timeframe would work best and a widespread evaluation of how useful the advice and the written plans were.

- 5 of 6 found the process helpful to move towards compliance.
- 4/6 farms said the project moderately changed their impact on water quality, one said no as he could not reduce his impact due to planning issues, and one said it had a significant impact. The latter farm has since installed a slurry store.
- Timeframe: 3 said it was too rushed, 3 said it was good to get it done quickly
- The 6 farmers picked 5 different specialist advice when ranking what advice was the most useful to them. Often, but not always, it aligned with what their main interest was when they entered the process.
- Unfortunately, one farmer could not implement the changes as a planning application was rejected on nutrient neutrality grounds, when the proposal was actually trying to reduce nutrient surpluses on the farm. This farmer deemed the Farm Transition Plan not to be useful.
- What changes has the Farm Transformation Plan already brought on your farm?
 - 'growing herbal leys, purchased trailing shoe to help with slurry applications'
 - 'Better hedge management'
 - 'Think about protein in feed'
 - 'We increased our slurry capacity. We have a long term plan to try and improve our animal husbandry and decrease our impact on the environment.'
 - 'Cover crops and companion crops'

- ‘none’ (because planning did not allow to do so)
- When asked what part of the project did not work for you or do you think you would have done differently, farmers answered:
 - Choice of specialist advisers which reflected our own thoughts on the matter
 - Too rushed and could have gone deeper
 - Would have been nice to meet up with the other farmers
 - ‘This project was more about delivering advice back to Defra on a pilot study of the river Axe as opposed to helping the farm business. As much as I enjoyed meeting the advisors and being involved, I felt that advice was given with environmental sensitivity in mind as opposed to the sustainability of our farm business’. Both of these points are fair as the project was assessing the situations that dairy farms are in in order to get an overview idea for the changes that might be needed in the catchment to achieve P reduction in the river. And of course environmental sensitivity was the main driver.

We gathered feedback from the 2 farmers who dropped out throughout the process. They said

- 2/2 thought the project has potential to be of value to their farm
- 2/2 thought the project had been well communicated to them
- Reasons for dropping out
 - Lack of time to meet specialist advisers
 - Reluctance to share details about the business and discuss with family members. The two business partners had different ideas. 1 was ‘desperate to get the advice’ and the other did not want to share farm business data
- When asked if they would be willing to participate in the future, they said
 - Participate in workshops first
 - Change in farm management structure

Suggestions for future delivery

- Gather similar feedback from this year’s farmers. The short timeframe has not allowed for this to happen.
- Gather feedback from the specialist advisers. Funding would need to be secured for this to happen.

Choice of participating farms & signing up farmers

Pilot Phase Suggestions (2021-2022)

- We suggested to have even more EA suggestions for farmers who need to take part. Ideally, farmers should be chosen who have infrastructure issues on the farm.

Testing Phase Implementation Strategy (2022-2023)

- We gathered farmer suggestions from the Environment Agency, the Axe Vale Rivers Association and local farm advisers.
- Deciding to focus on a particular area has made recruitment at short notice more difficult than the previous year.

Some of the farms were also suggested for being well respected farmers in the catchment who could provide more relatable case studies.

Evaluation of Testing Phase Implementation Strategy

- It could be argued that the participating farmers this year were 'too good' as they were profitable without BPS and SSAFO compliant in terms of slurry storage. However, 3 of them are in the process or have only recently completed constructing their SSAFO compliant slurry stores. This has not limited the value the advice model can provide, as we still found a lot of scope for improvements.
- SSAFO compliance does not mean compliance with the Farming Rules for Water. If a farm has sufficient slurry storage capacity, it does not mean that the farm can apply all its slurry without exceeding crop requirement (Role 1 of the Farming Rules for Water). Therefore, even SSAFO compliant farms require advice and have opportunities for reducing P risks on the farm.
- As often is the case, those farmers were probably interested and willing to take part because they are open to advice and to challenging their farming practices (which has already resulted in well positioned farm businesses compared to many others in the catchment). By working with open-minded farmers who also have head space and (frankly) budget to implement change, we could argue that we might achieve more than if we had worked with the less willing to engage, who might listen but do not have the headspace or budget to implement change.
- It is difficult to say whether it would be better to have the Environment Agency 'make' farmers take part who are non-compliant and/or are causing pollution or whether we work with farmers who are most interested in taking part. There are valid arguments for both sides. Arguably, polluting farmers need the advice more and more improvements can be made, but interested farmers, especially if well-respected in the community, could implement changes and become ambassadors, eventually motivating others to take part, too. Some of the farms who participated were suggested by the Environment Agency as being well respected farmers in the catchment who could provide relatable case studies.

Suggestions for future delivery

- We already put together a survey to line up interested farmers for future delivery. The intent is to send the survey to farmers via direct contacts and farm events. Farmers who are interested can leave their details and be contacted as and when funding becomes available.
- To recruit interested farmers, we have also suggested to run a set of workshops across the catchment (see above), subject to funding.
- Up to 24 farms will be put through the Triple Axe advice model as part of the Axe Landscape Recovery project, adopting the suggestions given in this report. Also, this project will cover a wider range of farm types, which will further highlight which farms we should be focusing on to make the biggest environmental gains.

Continued need for clear regulation, regulatory presence and schemes

Pilot Phase Suggestions (2021-2022)

- We highlighted that clear interpretations of the Farming Rules for Water are needed.

Testing Phase suggestions

- The same suggestions apply as last year as there has been no official guidance on how to interpret the rules.
- The wider agricultural industry needs to step up to help farmers with Farming Rules for Water compliance.
 - The FACTS training courses does not sufficiently cover the Farming Rules for Water and it has not yet been part of the exam which FACTS advisers have to complete annually to keep up their accreditation. In contrast, NVZ regulations are covered excessively which do not apply to the whole country and its requirements have (although depending on the interpretation of the Farming Rules for Water) been superseded by the Farming Rules for Water.
 - Feed merchants often do not disclose P content in feed, which makes P balance calculations and strategies to reduce P in feed very difficult.
 - Livestock nutritionists do not usually focus on P in feed and whether industry standards of P in feed are exceeded – they did in this project as we specifically asked them to.
 - Milk buyers are not currently aware of P issues on dairy farms but are incentivising farmers to reduce their carbon footprint and other environmental issues which are more publicly talked about.
- It is great to see that there is funding available for Nutrient Management plans under the Sustainable farming Incentive. However, the standard description does not even refer to the Farming Rules for Water and that it's rules should be followed in the plan. This is likely to lead to advisers telling farmers to improve their N use efficiency from slurry, which often means an overapplication of P over crop requirement.
- Agri-environment schemes payments are mostly based on income foregone rather than properly incentivising environmental delivery. Especially measures that take land out of production completely should have higher payment rates.