

Summary of the Agricultural Production Census Submission Made by IrrigationNZ

IrrigationNZ has recently made a submission on the 2022 Agriculture Production Census (APC) sought by Stats NZ and the Ministry for Primary Industries. IrrigationNZ presented specific suggestions relating to changes in the current questionnaire and came up with new topic proposals—all relevant to irrigation matters. The details are presented below.

IrrigationNZ suggested that Questions 78-81 as per the APC 2017 related to “Farm Practices – Irrigation” would all be included in the APC 2022, while being aware that irrigation and horticulture questions in the questionnaire once every two years and census.

- 1) A recommended change would be to question 80 (5518)¹ that currently incorporates “all other travelling and spray line systems not otherwise covered (e.g., guns, fixed and rotary booms, pods, long laterals, K-line, side roll, hand shift pipe, solid set-fixed grid)” into one answer, as hectares.

IrrigationNZ recommended *solid set - fixed grid* sprinklers be separated out as an individual system type to be a more useful comparison to “*centre pivots and linear moves (include area covered by end guns)*” (5517).

- These changes are needed because Solid set-fixed grid sprinklers have an operational configuration vastly different to the other system types listed. This irrigation system type is becoming increasingly used in the industry to improve distribution uniformity, a critical part of good irrigation water management.
- 2) IrrigationNZ suggested adding a new question that would help identify what area of the total is irrigated on flat land, i.e., less than 7°. Ideally breaking this down further to slopes of 0-7°, 8-16°, 16-25° and greater than 25° would be advantageous to align with other industry standards for land management descriptions.
 - Most farmers will have slope information available as part of their Farm Environment Plan modules. It is a further critical element in determining how effective fresh water is being utilised for irrigation. Irrigated land that is not flat is often associated with the adoption of fixed grid-solid set sprinklers to avoid inefficient surface runoff.
 - Unique challenges exist for successful irrigation of hill country. Rolling topography combined with variable soils and aspects create complexity. Increased irrigator knowledge and support, alongside new solutions are urgently needed. The above project report has collated existing ‘Good Management Practice’ Irrigation information for hill country farmer irrigators, identifying knowledge gaps and exploring new solutions, ultimately providing a comprehensive design and management guide.

¹ During the year ended x, what area of the farm was irrigated using each of the following systems?
Note: Include irrigated corners of paddocks that centre pivots can't cover

- Hill country in the context of irrigation guidelines refers to sloping ground ranging from 3° to 25°. Irrigation occurs on the full range of slopes. All crop types can be grown on hilly ground including
 - Hill country in the context of irrigation guidelines refers to sloping ground ranging from 3° to 25°. Irrigation occurs on the full range of slopes. All crop types can be grown on hilly ground including arable, pasture, viticulture and horticulture fruit and vegetables, limited only by the ability to harvest them.
 - It is important to note that nutrient management models will require a definition of land slope, and we are aware Overseer® defines a sloping paddock as being over 7°.
- 3) In the questions ranging from 78 to 81 (where relevant), it would be good to add the questions, 'what area of land is irrigable (i.e., possible hectares)' before asking 'what area (part of total) is irrigated? (i.e., actual hectares)'.
- It would be beneficial for various groups of stakeholders (from producers to policymakers) to know the percentage of actual land utilised for agricultural irrigation compared to total available irrigable area.
- 4) It would be useful to have questions on investments in irrigation infrastructure since the last census, particularly specifying the area in which these investments were needed (e.g., how much capital has been invested in new or upgraded irrigation in each land use activity, such as crop production, dairy, etc.)
- Questions on irrigation infrastructure investment would indicate changes in the agricultural production markets and impacts of those changes on land use and production decisions.
 - Overall, these questions are an important contributor to informing the development of good freshwater management policies such as the NPS – Freshwater Management and regional water plans.
 - Knowing the irrigation practices on a farm is an important differentiator in understanding fertilizer practices.

