

Kwinana East Port Zone - Opportunities and Constraints

Port Zone	Title	Description	Area	Frequency	Impact /cost
Kwinana East	Promoting farming systems without glyphosate to preserve this chemistry	<p>Glyphosate use has been a bone of contention for some time.</p> <p>More extension on alternative chemicals and systems that don't rely on glyphosate.</p>	4.65	4.1	3.95
Kwinana East	Low rainfall environment and low input farming	<p>Of interest to the LRZ are things such as:</p> <ul style="list-style-type: none"> • Some growers noted that they would like more research into managing sodic soils. • SA stubble research recently in a GRDC publication looks good, but we need some on the ground here. We are not chasing big yields, just margin. • Identify new or existing fodder crops/varieties/species suited to LRF zone which can be grazed then potentially produce hay or grain. 	3.9	3.75	3.8
Kwinana East	Extension of current work on heat and drought tolerance of cereals	<p>Members are interested in getting an update or further extension to the broader public about varietal tolerance in wheat and barley for heat and moisture stress.</p> <p>Some great scientific work being done on heat stress at flowering reported in GroundCover in recent months.</p>	3.85	3.15	4.15
Kwinana East	Quantifying the value of CTF in the eastern wheatbelt	Growers that are 5+ years down CTF continuous cropping with nil livestock and full stubble retention are achieving incredible results. They want to quantify this benefit against typical wheat sheep matches and non CTF system. This is inclusive but not limited to strip and disc.	3.4	3.65	4.05
Kwinana East	Pulses, rotations, profitable legumes/breaks	Members would like access to better break crops and legumes for their low rainfall farming systems. This has been an issue for some time. They want to see higher yielding, more reliable and lower break-even options for the LRZ of the western region.	3.65	3.35	3.75
Kwinana East	There is a lack of early sowing opportunities currently with the risk of	Access to early sowing agronomy packages and one of the things that they believe will help with this is herbicide package research and extension (products, rates, and applications in sometimes dry, warm autumn conditions) for early sown crops (canola, winter wheat etc).	3.65	3.2	3.5

	frost and heat in spring considered too high	They have also identified that there is a lack of early sowing opportunities as many growers are not willing to accept the risk of frost and heat at the end of the year.			
Kwinana East	Increased incidence of dry starts and lack of effective knockdowns sees an increased reliance on integrated weed management	This is issue is around IWM including mapping, green on green, ryegrass and radish management, with more analysis of IWM methods and technology specifically related to their port zone (low cost base). They also believe that some of the IWM options available need to be looked over multiple seasons. When does it become economic (different technology) and the thresholds for numbers of weeds for different technologies?	3.7	3.5	3.1
Kwinana East	Growers have access to information to manage soil acidity including variety choice (through NVT), & soil amelioration economics	Acidity and aluminium toxicity are still issues. There are three main areas: <ul style="list-style-type: none"> • more varieties of all crops with acid tolerance, including barley, wheat, canola, legumes and rhizobia ie breeding. • Further economics of soil amelioration in the LRF zone and lime incorporation options in windy environments. • Investigate varietal differences for things like Al tolerance, N useage, frost tolerance etc in all crops. 	2.9	3.5	3.65
Kwinana East	Access to local work and information on short season wheat and barley agronomy	Variety choices for early sowing, and short season wheat and barley agronomy trials similar to a late sown NVT, to allow for options around a late start. As well as a late start, it could also address the issue of an early break but with a drying profile and waiting for a germination at the end of the seeding program.	3.15	3.45	3.35
Kwinana East	With the lack of profitable break options and heavier soil types found in the eastern wheatbelt, crown rot is becoming more prevalent	Crown rot is a big problem in the eastern wheat belt on heavy soil types, and appears to be increasing. 40% of yield loss is often experienced in dry finish years, but with lots of variation between years and seasons. Growers expect Crown Rot in 7 out 10 seasons but want the cost to yield quantified. promise.	3.15	2.7	3.2
Kwinana East	Staffing issues, sourcing good quality staff and retaining them.	This is the third most limiting factor in our businesses after land purchasing and rainfall. Impacts on timing of management, seeding and spraying. It is constraining farm business profitability and expansion.	4.7	4.3	3.55
Kwinana East	Crop breeding work and development	Salinity. It's still a big issue and it's still and expanding issue. What are the current options being developed and what can be developed?	4.35	4.2	3.7

Breeding having more focus of things like net blotch rather than focussing on just yield.

Breeding, better variety than Harper, Yitpi, decent long season long season wheat and spreading frost risk that we can sow in April.

Barley... too many varieties - what do consumers/buyers really want?

Management of acid soils. Improving pH cost effectively. Varieties (acid tolerate) or crop types. mitigating low pH.

Lack of heat and frost tolerance in canola (long and short season)

Kwinana East	Annual herbicide and fungicide resistance testing of known populations to watch genetic change over time	<p>Concern about herbicide resistance in barley grass brome grass and ryegrass.</p> <p>Early spot form net blotch already present. Concerns over treatment costs. Fungicide rotation to avoid resistance and new actives in market making space confusing.</p> <p>Crown rot increasing as an issue.</p> <p>Old generic chemistry vs new proprietary chemistry, cost and effectiveness in low rainfall low yielding environment. Ie propiconazole multiple applications vs strobi mixes.</p> <p>Resistance management an issue.</p>	4.7	4.65	2.75
Kwinana East	Grass weed management is often difficult in the eastern wheatbelt	<p>Staggered germination of barley grass leading to huge pressures in crop. The issues with post applications of Imi's on crops, what are our control methods going forward?</p> <p>Early sowing with no knockdowns for 3 years, high rates of pre-emergent herbicides have been used to extend residual control on grass weeds which have consequently resulted in germination issues such as silly seed. We need cost effective grass weed control options for barley and brome grass for low rainfall eastern wheatbelt areas.</p> <p>New chemistry for late germinating ryegrass in cereals with a focus of MRLs and our end market.</p>	4.55	3.95	3.45

Kwinana East	Machinery investment costs seem to be growing and becoming hard to manage	Bigger programs wear out machines quicker. Need to understand the unit costs? Revisit owning versus contract hire. Multiple units or own + contract; as well as the economics around running multiples or one unit.	4.8	4.05	2.95
Kwinana East	Improve on farm connectivity to facilitate communication needs	What's the opportunity cost of missing out on cutting edge technology by not having proper coverage across the farm?	4	4.2	3.05
Kwinana East	Access and ability to use lime and on-farm sources	Growers are looking for more research on finding on-farm lime sources. This includes quality of on farm lime in the wheatbelt; cost/benefit; and more knowledge on what is best. With all the attention the different lime NV tests have had, which is the correct one and going forward, what will be industry standard considering new on farm lime sources? Various lime sources (Morrell, liquid, crushed sands) combined with dolomite/gypsum etc - cost on farm; cost/benefit analysis & yield response.	3.6	4.15	3.5
Kwinana East	Improving spray indicator guidelines for the Eastern wheatbelt	Spraying weather conditions with focus on drift inversions improvement to spray indicators (DELTA T) for the Eastern Wheatbelt of W.A.	4.3	4.5	2
Kwinana East	Biological integrity of soil with consideration given to chemical accumulation and the effect on nutrition and soil health	Is there a longer-term build-up of chemical usage on biology in continuous crop vs other management such as pasture or fallow. We know soil biology is important, we do not know what the chemical usage is doing to the balance of existing populations.	3.95	3.8	2.7
Kwinana East	Pulses, rotations, profitable legumes/breaks	Need access to better break crops and legumes for their low rainfall farming systems. This has been an issue for some time. Some growers attempt break crops and achieve great results by first setting up the system. Motivates others to have a proper try, but they need that system set up.	3.65	3.1	3
Kwinana East	Seeding gear set-up with particular interest in strip and disc	There is great deal of interest and reports of successful systems using disc machinery. There are opportunities to change machinery to improve water use efficiency etc. Tyne systems are trusted and very common. Growers typically understand the	2.4	3.1	1.95

management/farming system requirement. However, there are gaps in knowledge by growers in the Kwinana East port zone including a lack of knowledge of weed control in disc systems and how well do chemicals work in high stubble loads; response on different soil types; and which crops can the discs be used for.