

# Rudd

## Dual Purpose Wheat

### VARIETY SUMMARY

- Dual purpose winter wheat for grazing as well as grain production
- High yielding
- Very good resistance to all three rust types
- Red feed quality grain
- Awnless to allow cutting for hay or late season grazing
- BYDV Tolerant

### BREEDING

Rudd (E30-82) was bred by the CSIRO winter wheat breeding team with support from AWB Limited and growers through the GRDC. Yield testing and disease resistance assessment was carried out by CSIRO with support from various state departments and grower organizations.

Pedigree: Rudd was selected from a cross between B41 a CSIRO line and Rendezvous, a high yielding UK variety. Selection criteria were winter habit, rust resistance, septoria resistance, early maturity and good recovery from grazing.

### PLANT CHARACTERISTICS

Rudd has a short to medium harvest height and has good lodging resistance. Rudd is an awnless, red grained variety, that has good sprouting resistance, similar to Tennant and Gordon.

### DISEASE AND PEST RESISTANCE

**Table 1:** Plant characteristics and disease resistance of Rudd in comparison to other varieties.

Variety	Head Type		Sprouting Tolerance	Yellow Leaf Spot	Septoria	Rust Resistance			Lodging Resistance	Acid soils tolerance	BYDV Resist
	Colour	Awn				Stem	Leaf	Stripe			
Rudd	Red	No	T	MS/MR	R	R	R	R	R	MT	T
Brennan	White	No	I	MS	MR	MR	R	R-MR	MR	n/a	n/a

Plant and Disease Terms: I - Tolerant, M1 - Moderately Tolerant, M1, Moderately Intolerant, I - Intolerant, R - Resistant, MR - Moderately Resistant, MS - Moderately Susceptible, S - Susceptible, VS - Very Susceptible, H - High, M - Medium, L - Low, VL - Very Late, L - Late, M - Medium, E - Early, VE - Very Early, N/a - Not available

### SOIL TYPE

Winter wheats generally perform well on a range of soil types, however deep, well-drained soils are considered ideal. Winter wheats are able to tolerate waterlogging for short periods, although with reduced production rates. Rudd is moderately tolerant to acidic soils.

### MATURITY

Rudd is a long season variety which has a vernalisation (exposure to cold) requirement before it will flower and produce grain. When the vernalisation requirement has been met, flowering in Rudd will occur 10 days earlier than Lawson and some 13 days earlier than Tennant, and at a similar time to Dennis and Declic. Rudd would be too early for areas where late frosts regularly occur.

### AREA OF ADAPTATION

Rudd is best adapted to the shorter season regions of the high rainfall zone. This area includes the slopes of NSW, irrigated areas, the drier parts of the longer growing season areas in VIC and SA, and the temperate areas of southwest WA.

### GRAIN CHARACTERISTICS

Rudd produces grain that is red in colour and has the maximum classification of SFW (Special Feed Wheat) under the AWB Limited classification system. Where separate SFW segregations are not available, Rudd winter wheat will be received as feed and binned with downgraded milling wheat varieties. Rudd lacks certain baking qualities that disqualify it as a milling wheat variety.

 **YIELD**

Rudd has a similar forage yield to Tennant.

**Table 2 & 3.** Grain yield across the long season sites of NSW as a percentage of Whistler and as a percentage of Kellalac in Victoria.

Variety	NSW dry matter and grain recovery as a % of Whistler 1996-2002		
	Dry Matter 1st cut	Dry Matter 2nd cut	Grain Recovery
<b>Rudd</b>	<b>86</b>	<b>93</b>	<b>111</b>
Brennan	94	96	102
Currawong	101	102	109
Declic	-	-	-
Whistler	100	100	100

Data Source: NSW Agriculture

2001 replicated variety trials as a % of Kellalac						
Gnarwarre	Hamilton	Streatham	Wonwondah	Lake Bolac	Bool Lagoon	Rutherglen
<b>123</b>	<b>106</b>	<b>107</b>	<b>89</b>	<b>104</b>	<b>100</b>	<b>92</b>
140	91	103	87	107	103	85
103	117	103	105	98	96	102
107	105	112	98	112	103	97
107	110	100	109	99	96	110

Data Source: CSIRO, DNRE

 **AGRONOMIC GUIDELINES****Sowing**

- Rudd should not be sown outside the planting window of 1 February to 30 June as winter wheats require exposure to cold temperatures, or vernalisation, in order to produce grain. Rudd should not be sown as a summer crop.
- If the winter crop is intended for grazing as well as grain production, the crop should be sown in early autumn to maximize forage production. May sowings will significantly reduce the amount of forage available for winter grazing.
- Due to the varieties large seed size we recommend using the following formula to correctly determine seeding rate. Seed counts are supplied with newly purchased seed.

1000 Seed Weight (grams)	x	Target Plant Population	÷	100	÷	Establishment %	x	Germination %
.....		.....				.....		.....
= Your Seeding Rate.....kg/ha								

**Grazing**

- A major advantage of dual purpose winter wheats is their ability to be grazed by stock. Long season winter wheats are the only wheats suitable for winter grazing as they do not begin to develop ears before mid-winter.
- Early grazing of autumn sown wheat will remove leaf canopy and reduce growth to minimum rates. To encourage rapid crop growth, and to maximise forage production, it is recommended that the crop be left ungrazed until early winter.

- Close monitoring of Rudd should take place during spring to ensure that any stock is removed immediately when above ground head formation is detected. Jointing is evidence that ears are well above ground level and that stock should have previously been removed.
- Growers should monitor the progress of the crop to best determine when stock should be removed. By vertically slicing main shoots, growers will be able to check that the growing point remains below the soil surface whilst grazing continues.

**Nutrition**

- Successful winter wheat crops require proper nutrition. A 5 tonne per hectare winter wheat crop requires a minimum of 20kg/ha actual phosphorous and 100kg/ha of actual nitrogen, which must be drawn either from the soil or obtained through fertiliser applications.
- Nitrogen fertiliser application to winter wheat is best split between time of sowing and spring or after stock removal. Application of Phosphorous fertiliser to winter wheat is best banded with the seed or pre applied.

 **PLANT BREEDER RIGHTS AND ROYALTIES**

Rudd is protected by Plant Breeder Rights, any unauthorised commercial propagation or any sale, conditioning, export, import or stocking of propagating material of this variety is an infringement under the Plant Breeder's Rights Act, 1994. Growers are allowed to retain seed from production of this variety for their own use as seed only. A Seed Point Royalty is included in the purchase price of seed.

**ACKNOWLEDGEMENTS**

Rudd was bred by CSIRO with support from AWB Limited and growers through the GRDC.



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