AUSTRIAN WINTER PEAS
Planting Dates and Rates

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Idaho produces 90 to 95 per cent of the world's supply of Austrian winter peas. The majority of these peas are produced in Idaho and Lewis counties.

Austrian winter peas are frequently grown in rotation with winter wheat and winter or spring barley. They are raised for green manure or dry seed. Increased emphasis on the use of Austrian winter peas for human food and animal feed has stressed the need for improved cultural practices to increase seed yields.

To increase seed yields, farmers need to know answers to such questions as: What date and rate should Austrian winter peas be planted? To find the answers to these questions, Austrian winter peas were planted at different dates and rates on a clean, well prepared seedbed. In 1966-67, peas followed wheat, in 1967-68 peas followed fallow, and in 1968-69, peas followed spring barley. This report gives results of these studies.

How Does DATE of Planting Affect Seed Yield?

In general, Austrian winter peas planted in early to mid-September outyielded peas planted in late September or October (Table 1, a-b-c).

However, soil moisture at the time of planting will influence the effectiveness of date of seeding (Table 1, a). If soil moisture is low, as it was in the fall of 1966, early planted seed will not germinate until moisture becomes available. This gives you the same results as planting late. If soil moisture is good at the time of seeding, as it was in the fall of 1967 and 1968, early planting produces better seed yields.

Table 1. Austrian Winter Pea Yields (pounds/acre) from Different Dates and Rates of Seeding During Three Years.

(a) 1966-67

Date of Seeding	Rate of Seeding (lbs/A) 60	90	120	Mean
	Yield in lbs/A			
Sept. 20	2878	2996	2611	2828
Oct. 6	2611	2696	2654	2654
Oct. 20	2429	2194	2343	2322
Mean	2639	2629	2536	

(b) 1967-68

Date of Seeding	Rate of Seeding (lbs/A) 35	55	75	Mean
	Yield in lbs/A			
Sept. 26	2474	2586	3004	2688
Oct. 10	827	1466	1801	1365
Mean	1650	2026	2402	

(c) 1968-69

Date of Seeding	Rate of Seeding (lbs/A) 35	55	75	Mean
	Yield in lbs/A			
Sept. 12	3646	3997	4051	3898
Sept. 25	3091	3135	3747	3324
Oct. 9	2282	2303	2772	2452
Mean	3006	3145	3523	

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Peas planted early are more vigorous and establish a better root system than late planted peas. This enables the early planted peas to better withstand heaving and other winter injury. Earlier planted peas also flower earlier. This means they are in a better stage of maturity to avoid some of the hot dry summer periods detrimental to flowering and pod filling.

How Does RATE of Planting Affect Seed Yield?

Seeding rates of 60 to 75 pounds per acre provided near maximum dry seed yield in these trials (Table 1, a-b-c). In the 1966-67 trials, peas seeded at 60 pounds/acre yielded as much or more than peas seeded at 90 to 120 pounds/acre. In the 1967-68 trials, peas seeded at rates of 75 pounds/acre yielded 3000 pounds of dry seed/acre. In the 1968-69 trial, the best dry seed yields were obtained from peas seeded at rates of 55 to 75 pounds/acre. In 1967-68 and 1968-69 trials (Table 1, b-c) note that as seeding date was delayed, seeding rate needed to be increased to improve yield. For example; peas planted on Sept. 12 at 35 pounds/acre yielded about the same as peas planted on Sept. 25 at 75 pounds/acre and more than peas planted on Oct. 9 at 75 pounds/acre. This information indicates that if you must delay your seeding date, seeding rates must be increased. However, increased seeding rates at later dates will not completely compensate for early seeding.

With regard to seeding rates, it is interesting to note that Austrian winter peas have approximately twice as many seed per pound as spring peas. Therefore, a seeding rate of 75 pounds/acre of Austrian winter peas equals a seeding rate of 150 pounds/acre of spring peas in number of seed planted/acre.

Recommendations:

These studies indicate that early to mid-September planting is essential for good Austrian winter pea seed yields. Seeding rates of 60 to 75 pounds/acre produced good yields while heavier rates seemed to be detrimental. If seeding date must be delayed beyond September 20, seeding rates should be increased. Seeding rates should also be increased if Austrian winter peas are planted in a poor seedbed.

Future Trials:

Trials will be conducted on depth of seeding, fertilizers, rates of seeding, row spacing, and on diseases in relation to seeding dates. Results of these trials will be made available as these studies are completed.

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