

# Onion Spacing and Population Effects

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# The good and the bad of Spacing!

- Trade-off on both sides
  - Previous Standard of 5 1/2" to 6" spacing has led to more colossal onions, but sacrifices total packout/acre.
  - Tighter spacing of 4" to 4 3/4" seems to create more uniform packout and show higher profit/acre.
    - Unknowns of disease pressure, Bad years to come? What varieties work?

# What research shows?

- More work needs to be done! Bottom Line.
- Variety type probably comes into play.
- Disease issues are unknown from year to year.

# 2008-09 Plant Population Study

Treatment 1 = 4 inch spacing (87,120 plants/A)

Treatment 2 = 6 inch spacing (58,080 plants/A)

SB = Sugar Belle GE = Goldeneye

Transplanted 11/12/08

## Fertility Data

11/20	150 lbs	18-46-0	27-69-0
1/5	300 lbs.	5-10-15	15-30-45
1/22	300 lbs.	5-10-15	15-30-45
2/4	150 lbs.	CaNO3	22-0-0
2/16	200 lbs.	CaNO3	<u>31-0-0</u>
			<b>110-129-90</b>

# Field Weights

- Sugar Belle (harvested 4/27/09)
  - 4" spacing 721 field bags
  - 6" spacing 756 field bags (5% increase in yield)
- Goldeneye (harvested 4/30/09)
  - 4" spacing 789 field bags (10% increase in yield)
  - 6" spacing 713 field bags

## Graded Data - Sugar Belle

4" spacing

<u>Total Yield</u>	<u>Col.</u>	<u>Jum.</u>	<u>Med.</u>	<u>% Marketable</u>
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765 boxes	3%	83%	14%	71%
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(16% inc.)

25 bxs	637 bxs	103 bxs
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<u>X \$15</u>	<u>X\$14</u>	<u>X\$12</u>
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\$375	\$8918	\$1236	= \$10,529 (14% inc.)
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6" spacing

<u>Total Yield</u>	<u>Col.</u>	<u>Jum.</u>	<u>Med.</u>	<u>% Marketable</u> ***
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659 boxes	11%	83%	6%	58%
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73 bxs	547 bxs	39 bxs
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<u>X \$15</u>	<u>X\$14</u>	<u>X\$12</u>
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\$1095	\$7658	\$468	= \$9,221
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## Graded Data - Goldeneye

4" spacing

<u>Total Yield</u>	<u>Col.</u>	<u>Jum.</u>	<u>Med.</u>	<u>% Marketable</u>
1018 boxes (14% inc.)	1%	83%	16%	86%

10 bxs	845 bxs	163 bxs	
<u>X \$15</u>	<u>X\$14</u>	<u>X\$12</u>	
\$150	\$11830	\$1956	= \$13,936 (12% inc.)

6" spacing

<u>Total Yield</u>	<u>Col.</u>	<u>Jum.</u>	<u>Med.</u>	<u>% Marketable</u>
889 boxes	4%	92%	4%	83%

36 bxs	818 bxs	36 bxs	
<u>X \$15</u>	<u>X\$14</u>	<u>X\$12</u>	
\$540	\$11452	\$432	= \$12,424

# Conclusion

- This supports data from about 20 years ago regarding app. 90,000 plants/A for maximum profitability
- Went to wider spacing to decrease disease pressure potential
- Going back to tighter spacing due to better bulb quality and consumer desirability of size