Harvester Makes Believers
On-Farm Harvesting Verifies Hybrid Alfalfa's Potential

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Traditionally, new alfalfa varieties have been tested by universities and seed companies in small plots, often less than 3 feet wide and 20 feet long. Small plots enable researchers to test a large number of varieties, but they may not be the best for representing real on-farm field conditions. The seed industry began evaluating corn hybrids in on-farm strip trials in the mid 1960's. They found that yield data from on-farm strip trials did a better job of predicting on-farm performance and this continues to be the preferred way to test corn hybrids today.

To coincide with the commercial launch of the world's first hybrid alfalfa in March of 2001, an aggressive alfalfa on-farm strip trial program was established. Hybrid alfalfa had been tested in small plots for years but needed to be put to the real test - on the farm. At the start of the program, 27 farmers from 6 Midwestern states agreed to plant an alfalfa strip plot on their farm. In the meantime, the world's first hybrid alfalfa had been tested in small plots in 83 different university trials across 20 states. The hybrid alfalfa variety was tested side-by-side against 33 synthetic varieties in on-farm strip trials, and was tested against 127 synthetic varieties in university trials. Here the data is summarized for the 26 varieties that were tested both on the farm and in university trials.

In university small plots, the hybrid alfalfa variety had a positive yield advantage against 21 of the 26 synthetic varieties and averaged **3.2%** better. Comparing the same varieties on the farm in strip trials, the hybrid alfalfa variety had a positive yield advantage against all 26 of the synthetic check varieties and averaged **19.5%** better (Table 1). The hybrid alfalfa advantage is significantly greater on the farm than in small plots.

The forage quality was also tested in many of the on-farm strip trials. The hybrid alfalfa variety did not differ significantly in relative feed value from the synthetic varieties. However, the hybrid alfalfa variety had a milk per acre advantage against all the varieties tested, averaging **18.5%** better (Table 2).

What is different on the farm that makes the hybrid alfalfa perform so much better? The seed source could be different. The seed tested in the on-farm strip trials came from commercial bags of seed, and the seed in university trials doesn't necessarily. The plots on the farm may be managed differently and definitely get more abuse from wheel traffic of large equipment. The larger size of the strip plots and the different locations may also contribute to the differences we are seeing.

With results like these, expect to see an on-farm alfalfa strip trial near you.


Harvest


Gather


Bundle


Record

Table 1. Head-to-head forage yield comparisons of hybrid alfalfa to the 10 most widely tested synthetic varieties in on-farm strip trials and in university small plots.

	On Farm Strip Trials		University Small Plots	
Variety	Locations	Hybrid Yield Advantage	Locations	Hybrid Yield Advantage
Variety 1	16	25.4%	8	1.5%
Variety 2	7	25.9%	9	2.4%
Variety 3	11	22.6%	8	3.7%
Variety 4	14	21.0%	17	11.8%
Variety 5	14	22.6%	4	0.5%
Variety 6	11	10.6%	35	2.7%
Variety 7	4	14.5%	15	-0.6%
Variety 8	4	31.6%	16	3.0%
Variety 9	6	14.8%	3	3.7%
Variety 10	4	20.8%	9	2.1%

Table 2. Head-to-head milk/ac comparisons of hybrid alfalfa to the 10 most widely tested synthetic varieties in on-farm strip trials.

	On Farm Strip Trials	
Variety	Cuts	Hybrid Milk/Acre Advantage
Variety 1	16	18.6
Variety 2	7	15.4
Variety 3	11	17.4
Variety 4	14	22.9
Variety 5	14	16.0
Variety 6	11	6.8
Variety 7	4	9.0
Variety 8	4	26.0
Variety 9	6	9.4
Variety 10	4	9.7