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Corrugated alfalfa has been grown in the western United States for many years. In my experience, the corrugated alfalfa I have seen in Utah, Wyoming and Montana is furrowed for water management due to excessive side fall in the fields. Thus, with corrugated alfalfa, irrigation is done in the furrow rather than bordered checks. In the past 15 years we have seen corrugated alfalfa grown in California primarily in the foothills where side fall was again the determining factor for the furrowing. In the past five years we have seen more and more corrugated alfalfa grown on the valley floor.

The outstanding point, to me, in growing corrugated alfalfa versus bordered alfalfa is increased yields. The people I have watched grow corrugated alfalfa have always talked about increases in yields of 1 to 1½ tons per acre per year. In my case, the alfalfa was planted in late spring 1976 on 40-inch beds and I compared that alfalfa planted in corrugations to the first-year alfalfa planted with borders (Table 1).

Soil Preparation

Ground preparation, herbicide application, and listing would keep with the individual's farming practice. For planting, the 40-inch beds are, by far, the most popular, however 30-inch beds work very well. Knocking the beds down can be done with a bed shaper or a harrow. If harrowing the beds down, care should be taken to keep the furrows open. This can be done with a tractor-mounted rear cultivator bar with sweeps on it. The beds should be 5 to 6 inches high and the furrow should be approximately 2 to 4 inches at the bottom and 10 to 14 inches at the top. Don't be concerned about the different types of equipment fitting on the rows, because they won't. Swathers, rakes, tractors, balers and harrow beds are all different widths. Where the alfalfa beds are kept low, there is no problem.

Seed Covering

The seed rate should be 15 pounds to 25 pounds per acre. Covering can be done with a light harrow, cultipak, or ring roller. I have seen seed covered with a chain blanket in extremely cloddy conditions.

Irrigation

When irrigating from a fixed head ditch the beds should start two swather widths out into the field. A border levee from the ditch to the beginning of the corrugation should be developed at intervals suited to your particular field (Figure A). This area allows the turning of equipment between the fixed ditch and the beds without crossing the furrows. The border levee will guide the water to the furrows.

Harvest

Corrugated alfalfa gives you the flexibility of varying the harvest traffic pattern in your fields. Your swather may be started in a different location in the field each harvest, thus setting the traffic pattern for the raking and baling. We noticed by varying the swathing pattern we did not see the watergrass start where the windrow had been as seen in our bordered fields where the swather runs in the same location each time. The raking, baling and bale pick-up operation works the same as in a bordered field.

Costs

It is difficult to discuss specific farming operational costs at this time because so much is dependent on the individual farmer's preference; this is the unknown variable. As little or as much can be spent as individual preference dictates. However, one specific point that should be discussed about the physical operation is that of listing rows at \$5 per acre versus pulling borders at \$3 per acre versus bucking borders at \$4-\$6 per acre.

Conclusion

It is my personal observation that corrugated alfalfa will increase your yields up to 15% to 20% or higher, and therefore considerable thought should be given to this planting procedure when planning new alfalfa stands.

Table 1. Comparison: Bordered Acreage versus Corrugated Acreage, First-Year Alfalfa Hay, 1976.

Description	By Cutting: Average Tons per Acre					Year End Totals
	May	June	July	Aug	Sept	
Bordered Hay 380 acres						
1st cut 5/3/76	1.00	1.52	1.38	1.15	0.72	5.77
Corrugated Hay - 44 acres						
1st cut 5/25/76	1.68	1.92	1.89	0.87*	0.93	7.29
First-Year Advantage						1.52

*rain damage cutting

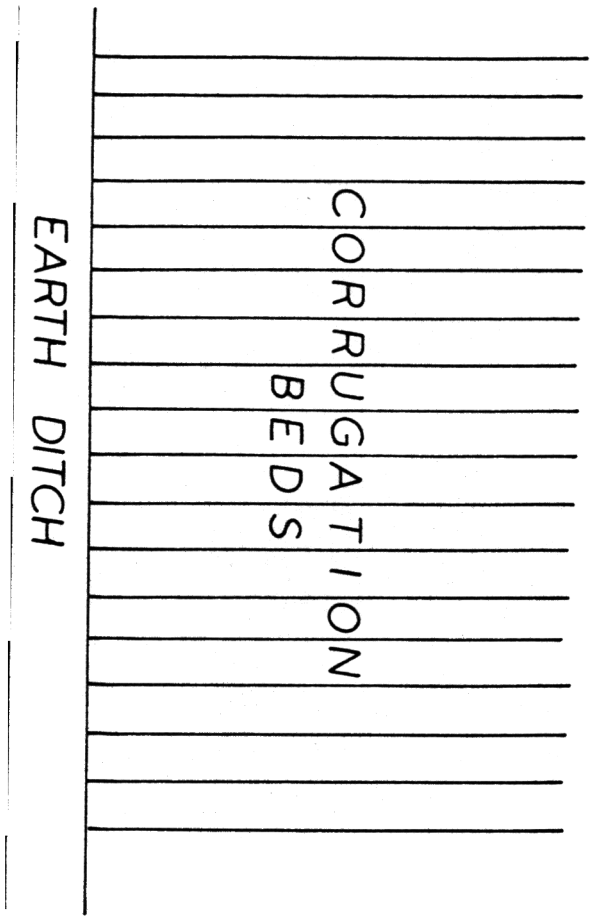
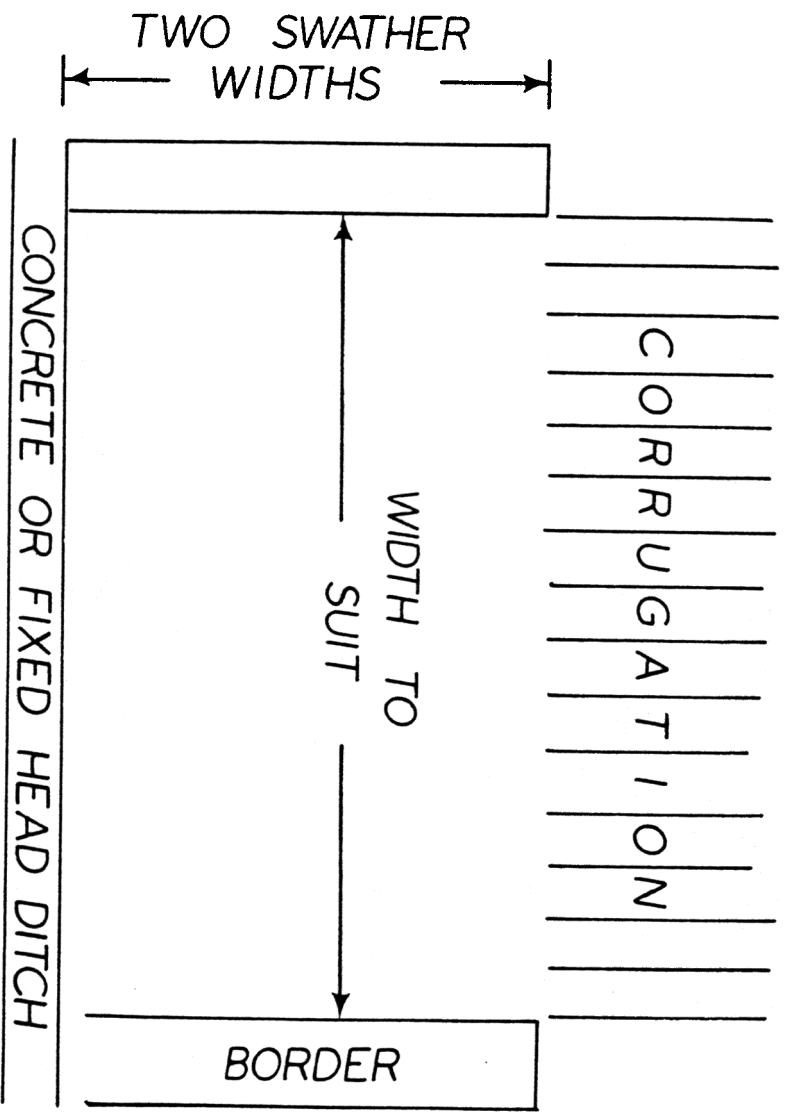


Figure A Examples of two possible field layouts for planting alfalfa on 100-ft top layout is preferred.