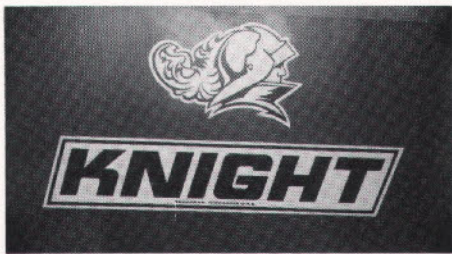
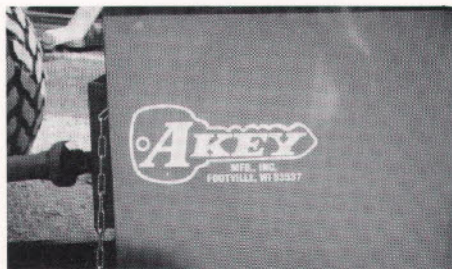


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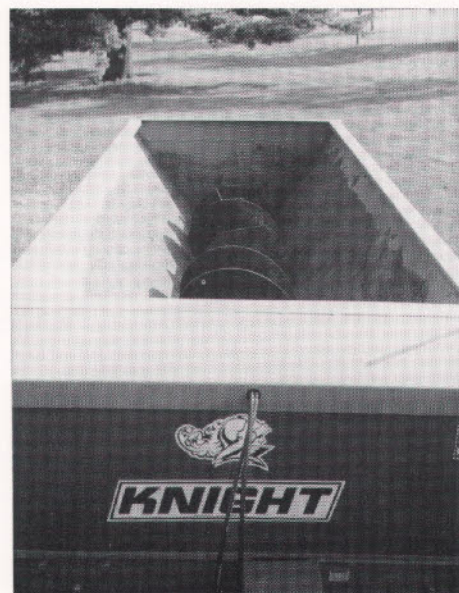
The Knight slinger spreader and . . .



the Akey spreader are both manufactured here in Wisconsin!



The Knight spreader is an extremely well-built and heavy duty machine. The flail bars you see at the delivery chute each weighs 10 pounds.



The feed auger on the Knight spread is made from 1/4" steel!

GETTING RID OF FAIRWAY CLIPPINGS: NEW APPLICATION OF AN OLD CONCEPT

By Randy Smith

My reason for writing this article is twofold. First, I would like to acknowledge several firms who assisted us during a recent American Junior Golf Association tournament at Nakoma Golf Club. Four days of junior competition representing 20 states along with our membership following them each day left almost no daylight hours for our maintenance staff to complete our work. We, therefore, made plans to accomplish the necessary tasks with many additional units. Five generous staff members from Blackhawk Country Club agreed to supplement our own staff in the operation of the extra equipment.

Those companies offering equipment were Hanley's of Sun Prairie with Ransomes, Farmers Implement Store of Madison with John Deere, Reinders Brothers of Elm Grove with Toro, and Wisconsin Turf of Janesville with Jacobsen. Thanks to them for making these seemingly insurmountable tasks easier.

My second reason for writing is to again thank Farmers Implement and Hanley's for working with us on what we feel can be a satisfactory alternative to the disposal of clippings from 15 to 30 acres of fairway turf.

Clippings have been collected for years on our greens and tees and the employees were instructed to hand "sling" those clippings into the rough. As play increased in the late '70's, we began triplex mowing our Par 3 fairways with a greens mower to supple-

ment the 9-gang fairway mower. At times we collected the clippings, particularly when the grass was wet with dew. Since the volume of the clippings was too great to disperse in the roughs, we hauled them back to our shop area. This procedure would come to an abrupt halt by mid-summer due to the strong aroma which became unbearable to all of us and which promoted accusations from our golfers that we are operating a "slaughter house!"

As we began to cut more and more of our fairways with triplexes and collect clippings regularly from 1/3 to 1/2 of our fairway area, we found it necessary to rent large 20 or 30 cubic yard dumpsters every three weeks at a cost of more than \$200 each time. After each three weeks of grass decay, the tractor operator and sanitation service driver were nearly overcome with fumes. About 2 1/2 years ago we tried to solve this problem by checking into the use of manure spreaders for this problem. By this season we had several units to observe over a period of time with the comments and observations of several persons on my staff.

Our observations were as follows:

1. The cost range of the various spreaders was from the mid-\$2,000 up to \$6,000. All units were P.T.O. drive.

2. The "A" machine is a fairly small unit and delivers grass in a narrow swath, approximately the width of the spreader. A pan modification under the beaters appears to be useful to lessen clumps from occurring behind the spreader. We found that pulling a

KEY	UNIT	MANUFACTURER	DISTRIBUTOR	CAPACITY	
				Bu.	Cu. Ft.
A	Model 50	Akey	Farmers Implement of Madison	50	62.5
B	Model 90	Akey	Farmers Implement of Madison	90	112.5
C	Model 213	New Holland	Hanley's of Sun Prairie	100	122
D	Model 912	Knight	Hanley's of Sun Prairie	190	238

(Continued from page 7)

heavy log chain hooked across the rear of the spreader helped disperse the short fairway clippings to a very tolerable and playable level.

3. The "B" unit is slightly larger, but still could have higher side walls installed to increase its capacity even more. We found that the log chain was also useful with this unit as was the pan modification under the beaters.

4. Both "A" and "B" machines have a baffle or controllable endgate to help regulate the outflow of heaped clippings as they near the beaters. A hydraulic modification may be desirable to control the baffle, but it is acceptable as it presently exists.

5. The "C" unit is in the middle of the price range with a little more capacity. It empties more rapidly than either "A" or "B". The chain drag was also found to be useful. A wider swath of clippings from the beaters was a plus, but the lack of a baffle to help even the flow of heaped clippings leaves room for modification. A different beater is apparently available for an even wider dispersion. A pan under the beaters was useful in lessening clumps.

6. The "D" machine is by far the most expensive of those we used, but it is also a very heavy duty unit. It has a side delivery of clippings rather than the rear delivery of the other units we looked at. We found the dispersion of clippings some 40' wide and quite uniform. They were unnoticeable in the 2" — 3" bluegrass rough, even without the use of a drag. The safety of this unit is questionable and requires close supervision around people and buildings due to its method of dispersion. Additional benefits of this unit may include using it for a shredder of such materials as sand trap edgings, old sod, soil without stones, and so on. It has been suggested by one Superintendent that it may be a candidate for topdressing fairways although we did not try it for that purpose. A hydraulic valve on the tractor is necessary to operate this unit, and this may be a problem with many turf tractors.

7. In using all of these machines we have not discovered noticeable paths of thatch or loose clipping buildup nor the fertility striping that we thought we might see. Units "A" and "B" may have to be used somewhat like we use drop spreaders to prevent striping, especially if the nutrient content of the clippings is fairly high. A slight hint of this striping was observed in an unfertilized rough where only a couple of



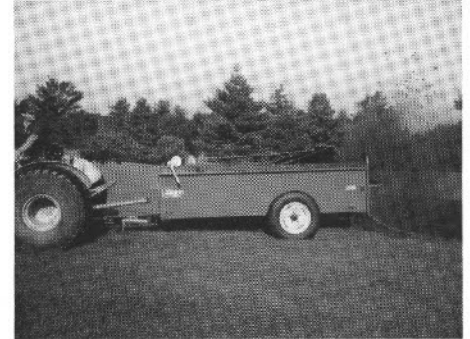
Close-up view of clipping distribution of the Knight slinger.



The distribution pattern of the Knight spreader is quite even.



The Akey models both do a very acceptable job of dispersing fairway clippings.



Notice the long chain drag behind the Akey Model 90.

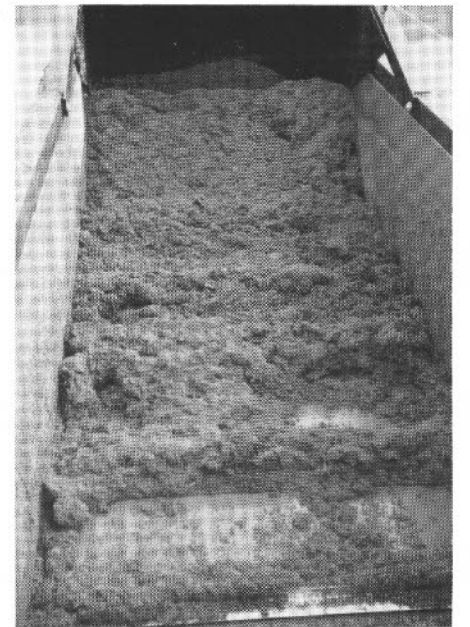
passes were made several feet apart and only one time this summer.

8. On roughs receiving clippings regularly (close to the shop, in our case) we have noticed thicker and greener turfgrass throughout the summer in comparison to roughs not receiving clippings. In this respect, we feel that we can provide a healthier rough by utilizing some of our own by-products. The 2" — 3" roughs should provide good competition to *Poa annua*. Also, it has been pointed to me by several people that the immature seeds that we are collecting from our fairways do not germinate anyway.

9. Loading procedures for all machines appear to be desirable from a loading dock, allowing direct dumping from a Toro Rac-O-Vac in our case. Much hand labor with silage forks and shovels is eliminated and the time that the clippings are piled in the rough is much less with the mechanical pickup. The crew likes the mechanical method much better!

10. In all cases, it appears to be desirable to spread the clippings the same day that they are collected, assuming odor and clumping are of concern.

We are excited about the potential that this method of clipping disposal



The chute on the Akey spreaders can be opened or closed as required to even flow of grass to the beaters.

has as long as we are going to continue the process on this many acres. Although our members have been inquisitive, we have had no negative comments from them thus far regarding the equipment for the quality and appearance of the roughs.