



Mulch Planting of

Corn Pays Off

Reports from six states show 110-bushel yields, lower labor costs, improved soil and higher profits.

By JOHN STROHM

"THIS May Revolutionize the Way You Grow Corn!" That's what we said about mulch planting in Feb., 1952. Here's a progress report from 6 states, including color photos of Dr. George Scarseth's cornfield in Tippecanoe Co., Ind.

High yields: Fifteen mulch-planted fields on both old cornstalk land and meadow yielded an average of 110 bushels of corn per acre this year, despite drought damage. For example: Scarseth's corn made 98.9 bu. although dry weather and excessive heat spoiled a potential 130-bu. crop. A Wisconsin mulch-planted field yielded 138 bu. per acre this year; 134 bu. last year. Funk's Research Acres, McLean Co., Ill., reports mulch-planted corn yielded from 125 to 154 bu. per acre.

Most farmers and experiment stations say mulch-planted corn will yield as much as corn planted the con-

ventional way, over a period of years. Some say it will yield more. "And mulch planting is worth MORE even if it yields somewhat LESS, because of other benefits," suggests Dr. George Pickard, Illinois ag engineer.

Less labor: George Scarseth grew corn with 3 man-tractor-hours of labor per acre, compared with 10 hours it takes average farmer—that's less than 2 minutes per bushel, compared with 12 minutes for average. Figuring \$4 an hour for man and tractor, he saved \$28 an acre—enough to pay for extra fertilizer to boost yield from 50 to 100 bu. per acre.

Erosion control: This is labeled "most important" by ag researchers. Example: A heavy 2½" rain fell 10 days after corn planting on a U. of Wisconsin test field with 12 to 14% slope. On the mulch-planted portion, there was no runoff; no soil lost.

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1 Mulch planter does once-over job without plowing, disking or harrowing. It prepares seedbed, plants corn, places fertilizer at two levels—2" and 8" deep. "A great labor saver," says Dr. Scarseth.



2 Heavy mulch of cornstalks and weed trash on third-year corn ground blotted up most of 6" heavy rain which fell in 3 days (left). Neighboring field (right), using common methods of planting and cultivation, suffered big runoff and soil loss.



3 By June 8, neighbors sadly predicted weeds would take over George's corn. Plants, however, show up dark green because of heavy row fertilization. A spray of ½ pt. of 2,4-D per acre wilted and helped control the broad-leaved weeds.



4 Shallow-disk cultivation 7 days later covered weeds and grass, threw dirt to corn. Only one cultivation keeps soil tilth from breaking down, and avoids excessive root pruning. Less corn is covered by cultivation when plants are larger.



Adequate fertilizer and heavy stand of 16,500 stalks per acre is key to high yields. Fertilizer included 134 lbs. of elemental nitrogen, 96 lbs. phosphorus (P₂O₅) and 120 lbs. potash (K₂O).



PHOTOS: J. C. ALLEN, JOHN STROHM

6 Phosphorus in starter near seed feeds it richly in embryonic stage when size of ear, stalk and brace roots are determined. Nitrogen placed deep, pulls down roots against drought. Simple tissue test (above) shows plants have plenty of nutrients.



7 Result: George Scarseth's "worn-out" problem soil has averaged 90 bu. for 3 years' continuous corn, despite two bad drought years which cut yields by 40 bu. Most important: Soil has better tilth, with a built-in productivity for high yields of corn in the future.

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Where corn was planted in conventional way, runoff measured 1¾" and 10 tons of soil was lost per acre, reports Dr. Art Peterson. Mulch planting saves both soil and water, farmers and researchers agree.

Improved soil: After 3 years of continuous corn planted with mulch tiller, "soil structure is distinctly improved" in Illinois tests, reports Dr. George Pickard. Reason: Plowing, harrowing, disking and excessive cultivation break down soil structure and heavy machinery compacts soil. There are 4 or 5 fewer "passes" over the land with mulch planter.

More profits: Farmers report higher profits with mulch planting for these reasons: 1. High yields. 2. Lower labor and machinery costs. 3. Because of increased soil productivity through better tilth and erosion control, land can grow more crops of corn over period of years—thus put more dollars in farmer's pocket.

Glenn Bunting, Lake Co., Ill., whose corn made over 130 bu. per acre this year says: "I wouldn't sell my mulch planter for \$15,000, if I couldn't buy another."

Farmers report these disadvantages: It increases weed problem, some think. It takes a big tractor to pull it. Planter is only a 2-row machine. Ohio State tests showed yield reductions during drought years. But because of widespread farm interest, International Harvester plans to make a number of the machines for sale next year.

As Emmett Fruin, Illinois farm manager, observes: "The mulch planter is very promising because we're now using too much power and machinery to plant corn. And the erosion control it gives is an extra dividend."

THE END