range were considered normal and used as a basis for comparison of the other three treatments.

Some difficulty in adjusting to the drylot was noted in both the silage and the all-concentrate groups. After the first two weeks, however, very few problems were encountered in any of the treatments.

About half of the cows calved during the wintering period. Of the cows that calved, those on the silage group lost significantly less weight than the other groups. Those on the native range and the all-concentrate ration lost similar amounts, and both of these groups lost significantly more weight during the wintering period than the two pasture groups. Weight gains during the summer grazing period were directly proportional to weight losses during the winter period.

Cattle on the all-concentrate ration did well until calving. After parturition, however, the cows lost weight steadily until the end of the feeding period. It was concluded that the cows that calved on limited all-concentrate rations should have been removed and provided with a higher intake of energy.

Only the silage group were observed to lose weight in adjusting back to the native range pasture. This period of stress at the beginning of the breeding period apparently brought about a lower conception rate in this group of cattle.

Costs of the wintering period favored the pasturage methods with the stubble-wheatfield method being the cheapest. Average costs during the winter period were: range—16¢, stubble-wheatfield — 12¢, silage — 30¢, and all-concentrate — 28¢/head/day.

LITERATURE CITED


How To Get A Bandwagon Going

JIM WILSON
Wilson Seed Farms, Polk, Nebraska

Highlight

A well-known native-grass seed producer tells how eastern Nebraska farmers and ranchers were inspired to help roll back the frontier of grass-planting knowledge in a unique and highly imaginative “do-it-yourself” grass experiment-and-education program.

“What do I want with your gol-dang bulletins? I ain’t doin’ half as good as I know how, as it is!”

It’s an old joke about a problem as old as agricultural science itself. How can we get the land-user to do as well as he knows how, and learn to do still better?

Hold more meetings and tours? Produce more radio and TV programs? Write more magazine articles and bulletins? Centralize the Information Service? Decentralize the Information Service? Replace the Coordinator with a Director, or vice versa? Overhaul the whole system?

No, the system itself is all right. Almost any system will work, if it’s well spiked with imagination. That’s what we’re short on.

Many college-trained professionals drift into the habit of depending on well-worn academic clichés of thought and expression, instead of thinking creatively. However, you can’t spread the Gospel by rote. Every successful speech, magazine article or information program is a unique, one-of-a-kind symphony of ideas dreamed up by some imaginative fence-jumper who has learned to soar above the dull world of set patterns and procedures and “play it by ear”.

In 1956, after half a lifetime as a travel writer, lecturer, and college teacher, I retired with my wife to one of our farms near the town of Polk, in east central Nebraska, and we began to produce native grass seed (Fig. 1). As landowners in two states, we’d been interested in conservation for many years, and had written several articles on the subject.

This was new territory for native grass. Most of the land-users weren’t ranchers, but farmers, brought up in the tradition of cultivated crops, many of them churning hill land to death in money-losing tillage because they didn’t know what else to do with it.

All they knew about native grass was that you couldn’t afford to plant it, because it “took five years to get a stand.” Not even the Soil Conservation Service nor the College could depend on getting good stands of big bluestem, indiangrass, switc-
grass and sidecoats grama consistently in eastern Nebraska. Too many features of the grass-planting technology developed for the western Great Plains didn’t work on the fertile, high-rainfall, weed-infested cropland of the Corn Belt.

We couldn’t sell our seed, because nobody had the know-how to use it. But our Work Unit Conservationist, Harold Klingman, was sure we could learn to make native grass competitive with cultivated crops in eastern Nebraska.

We couldn’t wait for the College to learn through research and tell us. They were desperately short on money and manpower, and anyway, the wheels of formal research turn pretty slowly, because everything has to go through Committee! As private enterprizers, we weren’t handicapped that way.

**Operation Bootstrap**

So we invented “Operation Bootstrap.” It wasn’t an organization. It was just a name for a way to get land-users steamed up to experiment with new ideas—to take some of the load off the overburdened research agencies and find out a few things for themselves.

To most farmers and ranchers, applied grass research is strictly a spectator sport. Only academic professionals are actually allowed on the playing field. When the game is over, the professionals announce the result in an impressive bulletin or article—often in form and language more suitable for other professionals than for land-users—and the land-users, having had nothing to do with the project up to this time, are expected to climb right up on the strange new bandwagon and drive off with it. When they don’t, the professionals are baffled and disappointed.

We tried a different tack. We got the land-users out on the playing field right at the start. We had to. There were so many things to be learned that our only hope was to enlist hordes of troops and attack on all fronts.

As the project developed, it was like putting together the pieces of a jigsaw puzzle. It took a lot of imagination to see how the scattered pieces fitted together. It takes imagination to assemble the ideas that make up any promotional campaign, magazine article, speech or bulletin, put them together and present them in such a way as to get men to act. Without imagination, the man who works with ideas is rattling dry bones.

What is imagination? Can you acquire it, if you don’t have much to start with? Can you learn creative thinking? Certainly.

How does a creative person invent a new idea in communication, in research, in anything? You do it the same way you put a jigsaw puzzle together—by dredging up seemingly unrelated ideas at random and trying them out in relation to each other until you find two or more that fit together.

In England 200 years ago, there was a need to pump water out of flooded coal mines faster than a donkey could do it. We’ve known about the crank for many hundred years. Kids have made popguns almost as long. Blacksmiths have had one-way valves in bellows even longer. And steam has blown lids off teakettles since man has had teakettles. Attach a steam popgun with valves to a crank and what do you have but a steam engine?

Col. Drake discovered petroleum at Titusville, Pennsylvania, in 1859; man tried kerosene in the old whale-oil lamp, and it worked. There was a by-product so explosive as to be useless. It was called gasoline. In the meantime, Faraday—by the same simple process of random fitting together and testing of apparently unrelated ideas—had come up with the electric spark coil. Take the steam out of the old steam-engine puzzle picture and try replacing it with gasoline and an electric spark. What would life be like today without the internal combustion engine?

The Chinese were flying kites 5,000 years ago. Two thousand years ago the Greeks amused themselves with toy propellors that rose through the air when spun between the hands. The Wright brothers perceived the natural affinity between these two ideas and the internal combustion engine, and today we fly through the air with the greatest of ease.

Now for an example closer home, in the field of agricultural communication. Let’s round up the scattered pieces of the eastern Nebraska native-grass jigsaw puzzle.

Here is a seed producer who needs more know-how in order to sell his seed and stay in business. Here are thousands of land-users who need the same know-how in order to use the grass seed to conquer erosion, produce more beef, make more money, and get more satisfaction out of life. These land-users have the universal human urge for fun, excitement, drama and adventure—anything to make life more interesting—and they have land, equipment, time, and money with which to experiment. Here are the SCS and the
College, short on money and men for tests and research, but willing to help with advice. Here are magazines, newspapers, slide projects, mimeographs, radio and TV, organizations that use speeches and programs—all the modern media of communication. And here is a whole world of ideas about grass-planting floating around in thin air, in people's minds, in Nature, waiting to be tried. Surely these elements all fit together just as beautifully as the kite, the propeller and the internal combustion engine.

The first thing was to whet the land-users' interest and get them talking about the Wilson Seed Farm and buying seed to experiment with. We had a good dramatic human-interest story about a couple, retired in their fifties, who weren't content to spend the rest of their lives playing shuffleboard in Florida, but came out to an unimproved Nebraska dry-land farm, leveled it for irrigation themselves while living in a trailer in the weeds and clods, learned to farm it, and now, unwilling to join the crowd raising surplus corn and milo, were doggedly learning how to plant grass the hard way — by making all the mistakes ever dreamed of, and then some!

And we had slides to go with the story. Not just dull, earthbound "shots for the record" — that isn't enough. Beautiful, soaring, emotionally charged scenes that lifted the heart while they informed the mind. My wife is a terrific photographer.

There was a spot in the jigsaw puzzle ready and waiting for that story. I didn't just point to a slide and say, "This is our leveling outfit," "This is our irrigation well." Using the formula I'd learned as a travel lecturer to keep audiences on the edge of their seats, I welded slides and narrative together into a smooth, fast-moving adventure story, complete with suspense, plot, obstacles, struggles and setbacks, progress and triumph (Fig. 2). As our seed customers, friends and advisors joined us in the search for answers to our mutual problems, I wrote them into the story to keep it up to date, portraying the characters in such a way that my audiences would identify with them in their quest and try the ideas themselves.

The theory of such a speech is the same as that behind popular newspaper and magazine writing for educational purposes. Don't expound abstract ideas. To most people, they simply aren't real. Make a story out of your story. Use illustrations, examples, anecdotes, snatches of conversation, showing how these ideas work out in real life. People like to hear about other people doing real things in a real world.

We had to advertise in the local papers to get their cooperation. However, display ads are expensive and people don't pay much attention to them. Everyone reads the want ads, though. Ever notice how you turn to the "Personal" column, hoping for a smile or an oddity of some kind? Testimonials!

We started with this one:

"Wilson Seed Farm. Dear Sir: I planted your switchgrass. It grown so tall my cows couldn't reach it. I traded my cows for giraffes. We got six litters a year. You know anybody got half a hog to trade for 300 giraffes? My wife and me are gittin' awful sick of giraffeburgers. Yogi Yorgensen."

We went on to match up well-known characters of all kinds with the idea of Grass and its many variations, looking for humorous relationships between them:

"Wilson's Pawnee Big Bluestem make heap good pasture. Maybe buffalo come back now. Sitting Bull."

"Confucius say: Wilson's Reed Canarygrass very good for chop suey."


This was the bait that got land-users coming to the Wilson Seed Farm, first by tens, then by hundreds, to see if that crazy guy might just accidentally be crazy like a fox. They usually left with a load of grass seed and a jugful of new ideas, eager to help us push back the frontier of Corn-Belt grass-planting technology by experimenting on a few acres.

The local papers in which we advertised were glad to run thumb-nail stories about grass every week, because we always made them imaginative, fresh and readable — like these two:

![Fig. 2. Seed producer Jim Wilson shows off his Holt indiangrass field. Photo by Roy Alleman, The Farmer Stockman, Cozad, Nebraska.](image1)

![Fig. 3. Leroy and Mrs. Nelson, SCS Work Unit Conservationist Harold Klingman, and Jim Wilson in Roy's 2-year old irrigated native-grass row pasture.](image2)
Nebraska’s Floating Away Again

Time for the early morning news. We turned on the radio and the familiar voice of Dutch Woodward filled the room. This time it wasn’t the disarmament talks, Jackie’s trip, the perennial hassle over the State Game Department, the unsuccessful burglar who got tossed in the clink—the same old news that’s always different, yet always the same.

This morning, the really BIG STORY was that Dutch’s wife had just come out from Omaha on U. P. number 27, and it was the last train to get through before the tracks were washed out.

The morning paper filled in the picture—helicopters hovering over drowned farms and valleys, families being evacuated to West Point and Beemer, the Elkhorn three feet above flood stage, highways 30 and 275 closed—complete with photos of farms under water and boats in Main Street.

Once again, Nebraska was floating away, and with it were millions of dollars invested in farm land. When the country dries off—new gullies, new mud flats, new patches of buckskin on hillsides to bake and crack in the sun.

Where did the floods start? On that rough, rolly-coaster field that your granddad plowed up in the sun. That rough, rolly-coaster field.

It isn’t any fun to have to admit a mistake. But if we didn’t tell you the bad, along with the good, you’d soon lose confidence in Operation Bootstrap. We therefore feel honor-bound to report the unfortunate experience of Leroy Nelson, who lives two miles west of Polk.

Roy has 4½ acres of irrigated native-grass pasture in two plots, planted three years ago. So far this season, these two little pastures have provided rotation grazing for 14 cows and four calves for almost seven weeks, and the grass is going to seed for lack of sufficient use (Fig. 3).

However, Roy says native grass is no good for milk cows. You have to buy too many milk cans. It runs the expense up too high.

These little sketches reflect that simple imaginative process of matching up apparently unrelated ideas till you find a combination that clicks.

I blew the grass bugle in regional and national farm magazines the same way, except that the articles were longer and contained a bigger pill within the sugar coating. I never wrote an “Introduction” to an article. Instead, I wrote an exciting, arresting beginning, that swept the reader directly into the flow of the story in spite of himself. If you can get a good, high-voltage beginning, the rest of the article will almost write itself.

Years ago, an SCS friend showed me a story on grass he was trying to write for a local paper. It began like this:

“Grass has become one of the most stimulating and motivating forces in getting farmers interested in Soil Conservation in northeastern Colorado. Through this interest, the door has been opened to a more significant interest in dealing with some of the more critical soil conservation problems which exist on most every farm and ranch.” Now who’s going to read that?

I gave him a copy of a speech on “How to Write Agricultural News and Feature Stories” which I’d made at a conference of District Conservationists. Next week he came back with this:

“You guys are poor salesmen,” rancher Harvey Harris told me. “Why do you tell a man to plant grass only on his poorest land? I plant it on the best land I’ve got!”

“Rancher Harris has plenty of proof that grass is a money-making crop on the very best land. So have Everett Barden, Gordie Knode and Bill Oliver.” And the article went on to give the proof in a lively series of anecdotes, each illustrating a different angle of the idea. Every farmer and rancher in the area read that story about what his neighbors were doing and talked about it for weeks afterward. Many infidels were brought to the True Faith.

To go back to Operation Bootstrap, soon we were laddling out seed right and left, and ideas to go along with it. Whenever a customer turned up, we’d invite him to live dangerously on a few acres.

“We don’t any of us know much about this business,” we’d say, “and we’ve all got to learn. How about helping? I have a hunch cool and warm-season grasses will do well together. Want to try it?” Or, “Here’s a new idea for licking the grassy weeds in new stands. Let us know how it works.”

Quickly the news spread that something new and exciting was happening. Within a year, land-users all over the area were champing at the bit to get in on the thrill of experiment and discovery. Whenever we turned up a new idea from any source—the SCS, the College, other farmers, or dreaming it up out of thin air by the process of imaginative thinking—we had a dozen communicants camped on our doorstep, eager to try it. Within five years we had, I am sure, more different kinds of experimental pasture plantings within a 100-mile radius of our seed farm than you could find anywhere else in the United States—dozens of each kind. Today, more than a thousand land-users are helping us learn the things we all need to know.

It isn’t “research”, of course. We don’t turn out scientific papers with tables and charts. With so many urgent problems to be cope with at once, we’d be licked at the start, if we took time for meticulous techniques.

We depend instead on mass experience and observation. We think that when a hundred or more land-users all try the same idea under different conditions and toss their experiences and opinions into a central hopper, what comes out at the bottom is likely to be as good a guide as the conclusion drawn from one meticulously conducted piece of research under one set of conditions on replicated table-size plots. It’s a dif-
ifferent kind of hunting—we shoot with a shotgun, not a rifle—but we bring down a lot of birds!

We've learned to get good native-grass stands the first year on rich soil infested with grassy-weed seed. We've learned that you can plant native grass in eastern Nebraska clear up to late July or early August most years. We pioneered the planting and correct management of "all-season" pastures—a mixture of warm-season natives plus a sprinkling of cool-season grass—on both dry and irrigated land (Fig. 4). Our great interest in this innovation is based on the experience of 386 cooperators whom we've persuaded to try it.

We pioneered the planting of irrigated pasture in cultivated rows on land with too much cross-slope to border and flood. We pioneered the planting of reed canarygrass for irrigation in Nebraska. We've learned that we can move most of the present varietal recommendations for warm-season native grasses up to 100 miles north on dry land, still farther on irrigated.

We've learned to get good stands of birdsfoot trefoil with native grass in Nebraska. Now we're experimenting with crownvetch. And we're even getting eastern Nebraska pasture-users converted to the gospel of "take half, leave half," believe it or not!

As our cooperators began to report how their experimental plantings were turning out, we sent out questionnaires, made inspection trips to see for ourselves, and passed the word along, through speeches and slide-grams, tours, magazine articles, breezy mimeographed handouts, and by word of mouth personally. More and more, my thumb-nail sketches for the local papers became success and how-to-do stories:

**Seeing Is Believing**

"It takes five years to get a good stand of native warm-season grasses," declared a Kansas man on the Operation Bootstrap tour two weeks ago. "I've done it, and I know."

"Maybe so, the way you do it in Kansas," said Elmer Allinder, "but not in Operation Bootstrap territory. Here it takes just a year."

On the Allinder farm southeast of Osceola the Kansas man saw the proof.

Go and see for yourself. Ask Elmer to show you his native-grass planting made last year in May—just 14 months ago. The grass is as thick as a carpet and as tall as a car. It's that cool, fresh, live green that's the most beautiful color in the world. This is what the Tall Grass Prairie looked like before the white man plowed it up or ruined it by over-grazing.

Look at the threadbare weed-and-bluegrass-infested native pastures along the Platte River. Then look at Elmer's planted grass. Now you can see why the SCS says the carrying capacity of old "grazed-out" native-grass pastures can be increased up to 500% by getting rid of the junk and planting improved strains of good grass. It can be done in about 18 months. If you want to know how, ask Operation Bootstrap.

Often we created news by putting together several elements in a situation in such a way as to benefit everyone concerned. One summer, to get information on fertilizing grass, we toggled up a mechanical plot-clipper out of an old sickle-type power lawnower and had high-school science students make clip tests on demonstration plots put out by the Extension Service with free fertilizer provided by a company in exchange for publicity (Fig. 5). Result: a fine magazine article, good experience for the students, more profit for land-users, increased fertilizer sales by the company, publicity for Operation Bootstrap, good will for the Wilson Seed Farm, and stars in everyone's crown. All things work together for the good of them that use their imaginations to put jigsaw puzzles together!

What has amazed and delighted us is the effect all this has had, not only on the land itself, but on the participating land-users. It makes 'em feel like astronauts—even those who were farming only because they'd had the misfortune to inherit the land and hadn't known how to escape from it.

It's given them a new vision of themselves and their relationship to the land on which they live and make a living. Imaginations that have lain dormant for decades light...
BANDWAGON

up like Christmas trees and infuse new meaning into lives that have been drab and inconsequential. And we have probably learned in six years as much about planting and managing grass in eastern Nebraska as we would have learned in fifty, had we waited for the wheels of conventional research to turn.

Our do-it-yourself experiment-and-education formula isn't adapted in whole cloth to institutions and agencies, of course, but they can learn a lot from it, especially about communication with land-users. Let me sum up the reasons why it succeeded.

First, we appealed to the human love of excitement, discovery and drama, and made the informal research program seem like high adventure. Farmers and ranchers were thrilled to take part in what had always been a “spectator sport” played by professionals only. The project wiped out the barrier between land-users and the professionals who helped with it.

Second, we communicated with land-users — in speeches, newspaper and magazine articles, radio and TV programs, handouts, and by word of mouth personally — in direct, simple language, instead of the language of the graduate school. There's a great temptation for professionals to express themselves in elaborate academic phraseology to impress their peers and the public. College students learn this as freshmen, by imitating their instructors. By the time they've escaped from graduate school, they're so used to it that they don't know they're doing it. How much easier it is to string together a train of well-worn professional clichés than to develop a fresh, graphic style of expression!

This, however, is not the way to win friends and influence intelligent laymen. A scientific truth is no less valid or respectable for being expressed in simple honest, earthy language that will inspire the public to put it to use.

Third, instead of expounding abstract ideas, we expressed those ideas in terms of experience, showing how they worked out in real life. As cooperators tried out new ideas and found them successful, we reported their stories in such a way that readers found it easy to identify with them and accept those ideas.

Fourth, instead of trying to make ourselves important to our cooperators, we made them important to each other and to us: "Let us know how this new idea in stand establishment works, so we can tell the rest of the boys."

"You want to know how all-season pastures pan out? Go talk to Ted Johnson—he's had one five years."

Most people's lives seem drab and inconsequential to them. If you can give them a sense of self-consequence and significance, they'll climb on almost any bandwagon. One old hard-shell proudly told us that he'd had 178 visitors to his grass-planting that summer. It was the high spot of his life.

A Forest Service grazing supervisor I knew in Colorado stood ace-high with ranchers.

"Barry," I asked him, "how did you get all these rugged individualists eating out of your hand this way?"

He laughed. "When I want 'em to do something," he said, "I make 'em think they thought it up!"

We didn't do that, exactly. But we did supplement the accumulated findings of formal research with a do-it-yourself program in which land-users themselves pushed back the frontiers of knowledge and experience with our help and the help of the generous-spirited professionals who worked with us. How they loved it!

Last and most important of all, we applied the principle of imaginative thinking—inventing new ideas and discovering new relationships by putting old ideas together in new ways—to everything we did, everything we wrote, everything we said, to knit all parts of the program together and give it meaning and impact. We got land-users to respond with their hearts as well as their minds, by appealing to their appreciation of beauty, their sense of personal and historical significance, their instinct for "one-ness" with the land, their sense of humor, personal pride, self-respect, desire for success and financial security, and love of excitement and drama. Thus we inspired them to act.