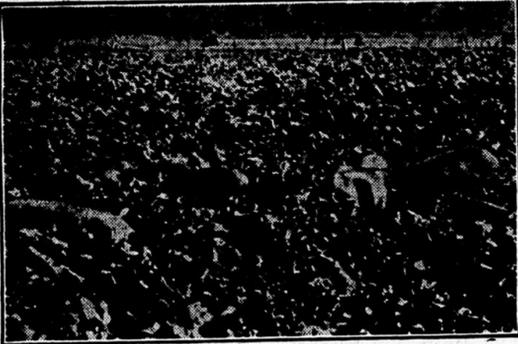


SOME TRUTHS ABOUT RAPE

By JOHN M. EVVARD, Iowa Experiment Station.

That ordinary fifty bushel corn and sown to Dwarf Essex rape and pastured with fard type hogs for a period of five to six months, fed corn and a little protein supplement, should show net profits of \$47 to \$154 an acre, hogs selling at \$6.00 and corn costing 50 cents, is somewhat surprising.

At the Iowa Experiment Station in 1909 we pastured seventeen hogs for a period of 147 days on rape, feeding them ear corn practically the entire period, one-tenth meat meal being added the last thirty-five days; three and nine-tenths pounds of grain were fed per hundred pounds of hog daily. Counting the cost of the corn at 50 cents and charging the pasture at \$9.20 an acre the feed cost of the pork was \$3.53 a hundred pounds. The net acre profit, corn at 50 cents and hogs at \$6.00, was \$47.47. These hogs returned 95 cents a bushel for all the corn fed, after paying other expenses. In 1910 twenty hogs were pastured, being fed one-tenth meat



THESE HOGS PASTURED ON DWARF ESSEX RAPE BROUGHT PROFITS OF \$47 TO \$154 AN ACRE.

meal the entire period along with corn. The pork cost \$3.79, but because of more hogs being pastured and greater gains made, the net profit was \$68.64. Ninety-two cents was netted for each bushel of corn. With a full feed of grain, corn plus one-twentieth meat meal, the pork in 1911 produced with forty-three hogs on the acre cost \$3.91, and the net profits were \$154.63. Because of the large amount of corn fed, only 80 cents was netted for a bushel of corn. Surely these figures speak well for plain, common, unassuming Dwarf Essex rape.

Rape is a superior emergency crop. If the clover fails, then the rape can be put in (be sure it is not the summer or bird-seed rape, a worthless variety found on some markets), with the assurance that the results secured will be equal to those gotten upon clover. Where rape and clover have been compared, side by side, in our trials upon the same character of soil and pastured with the same hogs (litter mates getting identically the same corn, water and sunshine), the rape as an average of a number of years has made us a little more net profits than medium red clover. What stronger recommendation could rape have than this?

We sow rape early in April and have pasture available the first week in June. A comparatively long pasturing season of five to six months, or from early June to late November, is entirely possible. The plants keep growing until the heavy frosts come, when the severe freezes wilt them.

The seed cost of rape is small, only five to six pounds being required to the acre. The price of rape seed on the average when bought in small lots should not exceed 10 cents. While if a hundred pounds is the purchase, 6, 7 or 8 cents in an average year will buy it. The maximum cost of seed, therefore, should not be more than 60 cents an acre.

Rape drilled in rows seven inches apart has proven a good method with us. The animal husbandry section has also planted rape in cultivatable rows, this method being advisable if the land is inclined to be weedy or of the "baking" kind. If soil moisture is easily evaporated, then cultivation is in order, because rape being a succulent crop, does need considerable water, though on the average soil it withstands drought much better than clover, flue grass, oats or corn.

That the dry matter of rape should show as high as 28 per cent protein in the edible portion as compared to but 30 per cent in alfalfa has shown us the reason why the hogs do so well on rape. It is interesting to know that our results have shown that rape actually requires less of the high priced supplement with growing pigs than does alfalfa.

Write the Bulletin Section, Ames, Iowa, for a copy of "Forage Crops For Swine."

WANTED, CLEAN CREAM

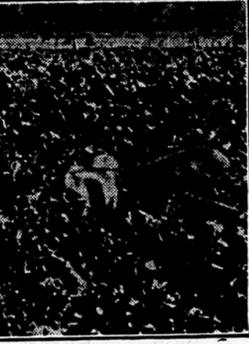
Many Iowa creameries now pay a bonus to the man who delivers his cream in a clean, sweet condition. No buttermaker can make the highest grade of butter from a dirty, sour cream. Those creameries which have a pride in producing a high class product are demanding that when the cream reaches the dairy it shall be free from filth and contamination, and be sweet and pure.

SWEET CLOVER AS FORAGE

By JOHN M. EVVARD, Iowa Experiment Station.

That the so-called weed, sweet clover, should have any merit as a hog forage is quite a surprise to some of us. When we realize, however, that sweet clover in the first year of its growth was superior to a good stand of red clover in the year 1910 at the Iowa Experiment Station we are somewhat willing to listen to a sweet clover story.

A comparison of sweet and medium red clover in 1910 at Ames showed that the gains upon medium red, corn costing 60 cents a bushel, were \$4.29 a hundred, as compared to \$4.26 on sweet clover. The net profits per acre, however, were in favor of the sweet clover. When corn cost 50 cents and hogs sold for \$5.00, the profits on the sweet was \$42.07, as compared to \$36.44 on the red. When the hogs sold for \$7.00, the profits were \$105.93 on sweet and \$94 on the red. The profits in the first case are \$5.63 in favor of the sweet clover and \$11.93 where the hogs sold for \$2.00 higher, or \$7.00 as compared to \$5.00.



THESE HOGS PASTURED ON DWARF ESSEX RAPE BROUGHT PROFITS OF \$47 TO \$154 AN ACRE.

The second year's growth of sweet clover, however, is not very valuable for hogs, simply because it tends to grow too rank and woody. The only remedy, of course, is to pasture quite closely, thus keeping tender growth always before the stock. One big advantage, however, of the second year is the early pasture furnished, the sweet clover running a race with rye and wheat for first honors. Sweet clover is a legume or nitrogen gatherer, belonging to that great family of plants to which red clover, alfalfa and soy beans belong. The quick growing tendency of sweet clover combined with its heavy yielding ability make it a superior soil enricher.



SWEET CLOVER A FINE FORAGE CROP FOR HOGS.

The protein content of the dry matter in sweet clover is exceptionally high. One of our samples of yellow variety ran 22.8 per cent, while the white sample ran 29 per cent. This was the entire plant of the first year's growth. The yellow was somewhat more mature than the white, which probably accounts somewhat for the big difference. This same sweet clover ran especially high in calcium, one of the premier bone forming elements, of which there is in the body two-thirds as much as of nitrogen. We must remember that 40 per cent of the dry matter of bone is calcium and that in this element corn is especially deficient, hence we notice that sweet clover is rich in both calcium and protein, which means that it will help balance the corn.

That sweet clover should run as high in protein as alfalfa did not surprise us, an edible which taken as the hogs gather it shows the sweet clover to run 30.33 per cent protein, while the alfalfa ran 30.69 per cent. The sweet clover ran 16.84 per cent mineral elements, while the alfalfa ran 11.03 per cent. The two plants growing side by side the first year show much similarity, but to distinguish between them one needs only to eat of the sweet clover, its bitter taste being an unfailing means of detection.

It is said that live stock will not eat on sweet clover. We know our hogs do not. That this bitter principle scientifically called cumarin should be responsible for the non-blooming qualities is probably the case. When we know that cumarin was in olden times often used in medicine as a digestive stimulant we can see it would be of considerable value to the plant; hence why breed out the bitter principle as some have suggested? Press rumors have it that the noted Burbank has been working on this problem.

That the bitter principle is not objectionable, live stock affirm. Our cattle and hogs and sheep once accustomed to the sweet clover have eaten it without further coaxing, and that the pasture gave results with hogs in the first year of its growth, the figures given show.

The Iowa Experiment Station would not care at this time to recommend the growth of sweet clover as a hog pasture upon those soils in the state that are well adapted to alfalfa. Our profits on alfalfa have doubled those on sweet clover. Alfalfa and red clover should be the standard leguminous crops of the state. Sweet clover, however, has its place and may be used to advantage in certain locations. There are certain types of clay soils upon which sweet clover does well; if the land is too wet for alfalfa, sweet clover may fill the niche of need. The hog grower will not make any serious mistake in pasturing fresh growth of sweet clover, as it gives economical gains.

ALFALFA GOOD HOG FORAGE

By JOHN M. EVVARD, Iowa Experiment Station.

The cheapest gain and the most profits per acre that have ever been secured upon forages at the Iowa Experiment Station have been made upon alfalfa. In the year 1911, alfalfa pasture, in conjunction with a medium grain ration of ear corn plus 1-20 meal, produced gain with corn costing 50 cents a bushel and alfalfa \$10.75 an acre at a cost of \$2.88 a hundred pounds.

A bulletin entitled "Forage Crops For Swine" is now being issued by the animal husbandry section of the experiment station, which tells about alfalfa and its merits as a forage crop. Other crops are also taken up, such as rape, blue grass, red clover, sweet clover and various mixtures of oats, peas, etc. A postal to the Bulletin Section, Ames, Iowa, will bring this material to your door.

Alfalfa runs especially high in protein, making it most efficient as a balancer of corn. Then, too, alfalfa contains considerable bone forming elements in which corn is deficient. Likewise alfalfa is a sweetener tending to correct the acid produced in the digestion and assimilation of corn. Our big problem in the corn belt, of course, is to secure a pasture that will help balance the corn; and alfalfa helps to do this to a very large degree.

Alfalfa is superior to clover both as a hay and pasture crop. Clover, we know, is good, but it only lives two years, while alfalfa lives two, three, four and more, and if handled properly will last six and seven and still yield profitable results. Then, too, not so much high priced supplement is needed on alfalfa pasture as on red clover, which indirectly means that we can home grow more of the stuff that is needed to furnish the protein and the bone forming elements.

We have grazed alfalfa with pigs at the Iowa station, which is in the central part of the state, from the 10th day of May to the 25th day of November, a period of six and a half months. Ordinarily we expect at least six months' pasture. In July and Au-



AN OLD ALFALFA PLANT—NOTE THE DEPTH OF THE ROOTS.

gust when the blue grass is dry and hard the alfalfa remains green and juicy and is much appreciated by the hogs. This is largely due to the deep root system of the alfalfa.

We have pastured alfalfa with hogs for a number of years and have never had any bloat or sickness of any kind caused from the forage.

Alfalfa hay is likewise good for the brood sows in winter, producing strong, healthy litters. Almost \$100 profit from an acre of alfalfa is our record for 1911. The actual results show that with corn charged at 50 cents, alfalfa at \$10.75 an acre and the hogs selling for \$6.00, the net profits on the acre were \$97.09. This is all described in the bulletin. You know that the above story is not exaggerated when we tell you that in 1912 the same acre of alfalfa, figure on the above basis, netted \$124.92.

Surely if corn is the king of forages, alfalfa is the queen.

For the loose smut of wheat and barley, the modified hot water treatment is recommended.

NEED CROP ROTATION

By R. M. TUTTLE, Iowa State College.

Even though the fertility of the soil could be permanently fixed so that the crop-producing power would not diminish, still the necessity for crop rotation would be as strong as ever. That is perhaps a broad statement, but Mr. Jacob Munger, of Clay county Iowa, clings to that policy like sand burrs to a mule's tail.

Mr. Munger is somewhat of a potato fancier and believes that potatoes are a money crop in northern Iowa. Five years ago he purchased a rich eighty acre farm and put half of it into potatoes. Several of the vines became infested with white and brown spots which in many cases killed them.

However, he gathered an enormous crop of large and seemingly sound potatoes which he stored under ground for four months. When he removed his crop from storage, about half of the tubers were infested with rot and were valueless. But encouraged by his enormous crop, Mr. Munger again planted potatoes upon the same forty acres. This time he sprayed frequently and succeeded in keeping the vines green, growing and healthy. "That spraying does the business," thought he and proceeded to harvest his crop. To his surprise, about one-fourth of the potatoes were already rotten and that meant immediate disposal of the remainder of the crop at any price he could get.

Disgusted with the potato business, Mr. Munger limited his next year's potato patch to five acres in the garden, and raised excellent crops of corn, oats and wheat on the old potato forty.

Potato growing is like steer feeding—a habit difficult to break—and now Mr. Munger is back in the potato business. Last year's crop on the old troublesome forty was a wonder, not a sign of dry rot infection of leaves or tubers.

"Will he use the same soil for his next crop?" is the logical question. "No," he says, "I'll use the other forty next year even if the soil is a



POTATO SPRAYER.

little poorer. I don't intend to let that disease get started again."

Mr. Munger has solved the problem. A rotation, bringing in crops other than the potato family, has put the dreaded disease out of existence.

This experience is only one of many that are benefiting progressive farmers all over the country. In speaking of plant diseases, Professor L. H. Pammel, of the Botany department of Iowa State college, says, "The hygienic treatment or rotation of crops promises the best results in eradication of plant diseases on the average farm."

Prof. A. L. Bakke, of the same department, says that the best known treatment for 80 per cent of the parasite diseases of economic plants, is crop rotation, using crops of other families than the ones on which the disease occurs.

Other plant diseases in which rotation of crops is beneficial are wilt of sweet corn, black rot, and club root of cabbage, flax wilt, leaf blight, wilt, and root rot of cotton, leaf spot of beans, early blight of potato, potato scab and wilt of cow pea and watermelon.

SPRAYING DEMONSTRATIONS

The extension department of the Iowa State college has scheduled a total of thirty-two orchard pruning and spraying demonstrations in almost as many counties in the state, and it is hoped that the farmers in the vicinity of the towns where these orchard demonstrations will be held will be sure to attend.

HAS A HUMP NOW.



Green—Do you think Koyne is straight? Wise—He used to be before he took to steering his own automobile.

WOLF AND THE LAMB

Young Stenographer Is Saved—Ruin's Brink by a Mere Incident.

By FRANK FILSON.

"I beg to remain, lovingly yours, John P. Stevens," the man dictated, and Miss Keith, his stenographer, started round in her chair.

"Lovingly, did you say, Mr. Stevens?" she asked in surprise. "Surely you are not going to write that to the Anderson Iron Foundry?"

John P. Stevens took the slim white hand which Miss Keith had laid upon the back of her chair and pressed it between his own. "No, my dear, I meant it for you," he said. "End the letter in the usual way."

Miss Keith smiled and hammered out the letter upon her typewriter in a couple of minutes. Then she glanced up at the clock and rose, patting her hair. Her hat hung upon its peg close by.

"One moment, Lucy," said Stevens. "What would you say to a little supper somewhere tonight? I've a couple of theater tickets which might come in handy afterward."

Miss Keith shook her head determinedly. "I couldn't," she answered. "Why not?" demanded the man blandly.

"Somebody might see us together who—"

"Yes?"

"Who knows your wife?"

"My wife," said Stevens, "has not seen me for nearly a year and wouldn't care. During our five years of wedded life I think I can say that she has thoroughly tired of me. Come Lucy, what's the odds?" he continued. He caught at the pretty wrists which she had just released from their paper cuffs. "Lucy, are you going to let that come between us when I love you?" asked Stevens.

He saw the agitation which she could not hide. Her hands were



"So You're Going to Desert the Ship, Eh?"

trembling as she put on her hat. "Outside the Hotel Sheffield at seven?" he whispered, and she nodded hastily and hurried away.

Stevens leaned back in his chair and lit a cigar. He was wondering just how much his pretty stenographer cared for him and how much was due to the fact that the Stevens Protection company netted him a clear forty thousand dollars a year. Six months before, when she had come to work for him in her first position, she had been a prim, innocent-eyed country girl of whom he had been almost afraid. Somehow she reminded him of Mary, his wife, who had left him not long before when she had discovered certain matters in his life. Yet he had really loved Mary. Perhaps if he had gone humbly to her. . . . He puffed out a cloud of smoke. Well, for all his money he was down and out so far as decent friendships were concerned. All their friends had sided with Mary. Stevens had been through a whirl of dissipation since that time. He was having his fling—all the pleasure that life now held for him. Undoubtedly his subtly bestowed praise, his kindness, his attentions had turned Miss Keith's head. Well, if she was such a little fool as to play with fire.

Stevens looked up to see his bookkeeper, Henry Austin, standing at the door of his private office. The young fellow had been in his employment some two years; he worked, for a pittance of forty dollars a month, in the dimly lighted stock room at the opposite end of the floor. He looked at Stevens in an imploring manner that irritated the manufacturer.

"Well, Austin, what is it?" he asked. "I want to give you a week's notice to leave, Mr. Stevens," answered the young fellow, coming forward, his hat in his hand.

"So you're going to desert the ship, eh?" sneered Stevens. "Why? Got a better job?"

"No, Mr. Stevens. I haven't got a position yet," he replied.

"Want your salary raised?"

"No, sir, it isn't that. I'm perfectly satisfied."

Moved by an impulse of kindness which surprised himself, Stevens walked forward and placed his hand upon the young fellow's shoulder.

"Best tell me what's the trouble," he said.

"I will," Austin blurted out, his bold features sparkling convulsively. "You were my own kid and willing to fight I'd just about kill you. Miss Keith and I were—we were going to

be married as soon as I got a raise to fifty. She's from my home town. And now—you—"

"So that's the trouble, eh?" said Stevens, nodding understandingly. "You think I've got you out in her affections, eh? Why, didn't you know that I'm married?"

"Yes, damn you," shouted Austin. "That's just where the trouble lies. I can't fight a man twice my weight and the law wouldn't give me any redress, so I'm going to leave. Take your week's notice. I'll get out this evening."

"No you won't, Austin," said Stevens, with sudden emphasis. "Now see here! Suppose I were out of the way; do you think she'd marry you? Do you think that if I raised you to—well, sixty, say, you'd be man enough not to be satisfied with everything and to keep her at home to look after your house, and to try to make something of yourself?"

Austin stared at him, his lips slightly parted, astounded by this unexpected turn.

"My son," said the manufacturer, "you blame me—but that's where you're wrong. This is a fighting world—it isn't a world where we whine for justice and get it. Maybe I've been too much of a wolf and too little of a lamb, but I'm going to do the square thing for once. Here's your chance—will you take it?"

"You bet I will," answered the bookkeeper breathlessly.

Stevens nodded and put on his hat. He went out humming. He saw what Austin saw, that he was responsible for having put the poison of ambition into Miss Keith's mind; but he knew also that it required its drastic antidote, to humble her. He took a street car up to the rendezvous and waited inside the hotel.

The hands of the clock were just upon the hour when he saw his stenographer's trim figure pass slowly before the revolving glass door, and, throwing his cigar, he went outside. "Good evening, Miss Keith," he said, raising his hat. "Waiting to see me?"

The girl recoiled a little and looked at him, an angry flush reddening her cheeks. Stevens patted her on the arm.

"Run away home, little girl," he said. "I've changed my mind. And say," he continued, "you needn't report to me tomorrow or ever again. I'm going to get a business woman for my stenographer next time, and not your kind."

He turned and left her, speechless with indignation. Then, because the medicine sickened the giver as well as the recipient, he went back into the hotel and sat for a long time in the smoking room. At last he rose, and, with a sudden determination, went forward the door. His features had softened out of their habitual hard lines.

"I wonder," he said meditatively, "I wonder if Mary would give me another chance?"

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Tells Consumptives How He Got Well

Tuberculosis is said to be curable by simply living in the open air and taking an abundance of food, and rest. Undoubtedly, some persons are benefited in this way; but the appropriate remedy for Consumptives is Eckman's Alternative. Do all you possibly can to add to strength and increase weight; eat wholesome, nourishing food, and breathe the cleanest and purest air—then, to the sensible things of right living, add the tonic and beneficial effects of Eckman's Alternative. Read what it did in this case:

405 E. 5th Street, Wilmington, Del.

"Gentlemen: In January, 1908, I was taken with hemorrhages of the lungs. My physician, one of the leading practitioners, said that it was lung trouble. I took eggs and milk in quantities, but I got very weak. The doctors said I would not gain in weight as long as I stayed in the store; but I kept on working and prayed each day that I might get well. I believe my prayers were answered for Mr. C. A. Lippincott, my employer (Lippincott & Co., Department Store, 300 to 314 Market street, Wilmington, Del.), had learned of a remedy called Eckman's Alternative that had done great good, and upon his recommendation I began taking it at once. This was about June, 1908. I continued faithfully, using no other remedy, and finally noticed the clearing of the lungs. I firmly believe Eckman's Alternative saved my life. I sent my aptly named letter to the State Board of Health to be examined for tuberculosis bacilli, and none were found. My mother died from Consumption when I was about two years old.

"I make this statement so that others may learn of the wonderful merits of Eckman's Alternative. I regard my recovery as being miraculous.

(Sworn Affidavit) JAS. SQUIRES. Eckman's Alternative is effective in Bronchitis, Asthma, Hay Fever, Throat and Lung Trouble, and in rebuilding the system. Does not contain poisons, opiates or habit-forming drugs. Ask for booklet telling of recoveries, and write to Eckman Laboratory, Philadelphia, Pa. for more evidence. For sale by all leading druggists.

P. A. Clemmer, Cresco

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CANCER OF BREAST, LIP, FACE

or body always begins a small tumor, lump or sore full of pus and certain death. I have cured 25,000 cancers and tumors thousands dying—cured too late. Write to

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