ond season all the rows, except the strawberries, will increase in value and production until you will have to set up nights to eat fruit, or let your wife or daughter have the surplus to sell. You, Brother Farmer, furnish the plants and let the wife and daughter furnish your table with all the fruit you want three times a day, on condition that they can have the surplus, and I will risk your having to buy sandy berries from Michigan.

Good land, well fenced, long rows, good plants true to name from some reliable nursery, not a traveling man, well tended, properly mulched in November, and you will be happy, have less doctor's bills and eat less pork.

Now a word about the vegetable garden. Plant potatoes or peas next to the strawberries, so the ground will be in good condition for your next two rows of strawberries, plant all rows through the whole length of the garden and wide enough so you can cultivate with a horse. Put in plenty of seed, tend well, thin out properly and then what room you have left plant to sweet corn or potatoes, and this acre of ground well cared for, will be the most profitable acre on the farm.

If you will save a little of your cigar money and buy a dozen Jessies and put them in your strawberry row, I have no doubt but what you will be pleased. I have named well tried and profitable kinds. I might have put in Sharpless but it is so tender in bud and blossom we lose the fruit three years out of four every time. If you want the latest novelty that is on the boom, plant Jessie.

County Roads.
[By Prof. L. D. Livermore, Beaver Dam, Wis.]

The age and respectability of this subject is enough to secure it our respectful consideration. First, let me say that I consider it a far greater mark of careful thought to be able to lead in a new or fitter way than to condemn as useless that thing or way, which is so nearly connected with the present as well as the past, as the improvement and use of county roads. You will agree with me when I say that there is no other thing in which such a degree of responsibility is incurred, that we have been so ready to engage in as the laying and opening of highways, and from this cause, if no other, arises much of the trouble.

Petitions for this purpose are circulated and signed with much the same feeling as a petition to congress. The responsibility of the matter is left with the one most interested because you see he might want a public road to our pasture. Some day I would need these same names. Or better still nearly all good fish ponds are back of some man's homestead. Now who would not sign a petition to divide the farm with a four rod lane provided our convenience and pleasure might at once be satisfied and at the public expense.

The pioneers of any country meet and must overcome obstacles which to late generations would seem insurmountable. In our hilly broken country it is a wonder how the early settlers ever found and located these now comfortable and productive homes. It was not then how may I with the most convenience and ease cancel this tax and be relieved from this obligation, but rather how may we by our united effort reach a certain point and make it possible to reach our neighbors with team and wagon rather than on horseback or on foot. In those days we often traveled forty miles to reach our nearest city market and return really only six miles distant.

Those were the days of extravagance, waste and poor results, for example: with a little over one-half mile of road to make across soft ground our town of Trempeleau has expended money enough to build the road and make it permanent for three times that distance and it is not completed half way across yet. Why? I take it we are here to tell some of our experience rather than to formulate a theory.

The highway referred to was through heavy timber. In the winters of '59 or '60 men and teams were at work and logs about sixteen feet long were laid down the whole distance, partly on ice sometimes, on a stump cut off close to the level of the ice. The holes between these logs were climbed with bits of wood. On top of this some sand was laid. Bridges were set on mud sills resting on sand. This job was accepted and paid for as per contract and that before the frost went out. It needed no words of mine to tell the result of this experiment. It was never open to the public. About '65—another trial—it was graded with quick sand and muck thrown up from either side and, like the parable of old, the rains beat on
that road only a little and it moved on
down stream, the logs and a little sand
was left. I am safe in saying, that
many parts of this road has been filled
twenty times and we are filling them
yet.

Three years ago next June, being a
member of the Board of Supervisors,
we concluded to try on a small scale
what could be done. We again made
the fill with earth, ripraped the sides
and on top broken stones were laid ten
inches thick. Since then that part has
not needed one cent for repair, or its
maintenance. We have now about sev-
enty rods of this road always ready for
use, and needing no repairs.

This kind of road will cost in soft
ground, when the gravel must be drawn,
close on to $20.00 per rod, depending;
of course, upon the price of stone and
labor. The time has come for towns to
work together in this matter in a sys-
tematic way, that the main lines of
highway between points where trade
centers and where farmers products are
wanted, may always be ready for use.
Else when the roads are good the mar-
kets are overdone; the rest of the time
prices are above what commers can pay,
with no supply. The producers in these
changes are always at a loss. The
ability to move a quantity from one
place to another is measured by the rise
of some grade on the depth of mud or
road. These may not be frequent, but
as often as they do occur, limit the
moving force of your team.

The earnest inquiry of all is how can
we better our condition. I say not by
paying more taxes. Any reform that
looks toward the reduction of taxes may
be inaugurated by the popular vote.
We are assessed on an average for
every four miles $1.00 for road pur-
poses. It takes the time of the farmer,
his team and hired men to pay this heavy
tax. If they do but little this time is
gone. I am confident that one-half of
this amount, if paid in with other taxes
and worked out on the basis of ten
hours for a day's work, under a system
of general improvement, would be
greatly to our advantage.

We attempt too much and accomplish
but little; building too much for our-
selves, forgetting that in a few years we
shall be done with. Work and trial,
and our grandest monument is some
lasting benefit to our fellows. We are
not fair, wishing to inanerate complete
and pay for the whole. With iron pro-
duced in our own state we can no
longer afford to build new bridges once
in eight years, when for twice the
money a structure of iron could be
placed on stone foundations, good for
fifty years at least. For small culverts
a 12-inch tyle drain avoids risk from
broken plank and are durable.

Let us see to it that the roads are
made passable and permanent, that
taxes are lowered, and that durable
material is used in the construction of
bridges and culverts.

The Value and Management of Manures.
[By Pres. W. I. Chamberlain, of Iowa Agri-
cultural College, Ames, Iowa.]

We must be convinced of the value
of manure before we shall really look to
its careful saving and wise manage-
ment. Especially is this true in each
new and fertile region. It takes a full
generation to make the farmers there
believe manure is worth saving. In
Illinois they used to say, when the ma-
 nue heap got so big they could neither
go over nor around it, they moved the
barn. Six years ago I asked Mr. Dal-
rymple, the Dakota wheat king, what
he was going to do with certain vast
piles of manure accumulated in five
years on his huge wheat farm. His re-
ply was this: "The Lord only knows;
we've got no earthly use for it."

And yet, I had just come through
Southern Minnesota where fifteen years
cropping with wheat and without ma-
nure had reduced the wheat yields from
twenty-five bushels per acre to six bush-
els or less, so that they were driven in
to dairying or stock raising to restore
their soil's fertility. The idea of Mr.
Dalrymple making such a speech right
in sight almost of such facts. But in
these, as in many other things, experi-
ence cannot be had by proxy. "Peek's
Bad Boy" hits it when he blubbers out
between the sobs and tears of his latest
threshing, "seems to me grown folks
'spect little boys to know things before
they've found them out."

Let me emphasize the value of ma-
nure in a dry year, even on new and
rich soil by giving a few facts.

On the I. A. C. farm this year pota-
tatoes were grown on land that had over
thirty tons per acre of best rotted stable
manure, plowed in the fall before.
From the time the potatoes came up
till the time the vines died they only