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IARBAS, Registered
Percheron Stallion

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PURE BRED
Stallion No. 69163

IARBAS is a fine
big grey
animal
of 2050 pounds,
whose colts are al-
ways prize-winners.

TERMS: Season, less
than 8 mares
\$15 each; eight or more
mares \$12.50 each. To
insure mare with foal,
less than eight mares
\$25 each; eight or more
mares, \$20 each.

Will Stand Season of 1913 at Parman Bros' ranch
Three Miles Northwest of Condon, Oregon

Furnish Pasture for Mares from a distance at \$1.50 per month.
PARMAN BROS., OWNERS

The Wheatdale Stock Farm
Condon, Oregon. Parman Bros., Owners.

Breeders of Grade and Purebred Percherons, Poland
China Hogs, Mammoth Bronze Turkeys and Scotch
Collies. All stock is guaranteed to be strictly
high class. Pedigrees furnished with all
purebred stock. All communications will
receive prompt attention.

The Wheatdale Stock Farm

GLOBE - The Paper That Goes Home

A RIOT OF BLOOM

SEVENTH ANNUAL

ROSE FESTIVAL

Portland, Oregon, June 9 to 14 Inc.

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Fares from all O-W. R. & N. stations to
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**TICKETS
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**June 8-9
11 and 13**
Final limit June 16

**A Carnival of Fun, Beauty
and Wholesome Enjoyment**

Bring the folks and witness the gorgeous event. Full
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Don't Miss It.

D. Tierney, Agent, Condon, Oregon

HOME COURSE IN SCIENTIFIC AGRICULTURE

THIRD ARTICLE—BARN- YARD MANURE.

By W. H. BEAL of the Office of Ex-
periment Stations, Department
of Agriculture.

ACCORDING to recent statistics
there are in the United States,
in round numbers, 19,500,000
horses, mules, etc., 61,000,000
cattle, 47,000,000 hogs and 61,000,000
sheep. Experiments indicate that if
these animals were kept in stalls or pens
throughout the year and the manure
carefully saved the approximate value
of the fertilizing constituents of the
manure produced by each horse or
mule annually would be \$27, by each
head of cattle \$20, by each hog \$8 and
by each sheep \$2.

These estimates are based on the val-
ues usually assigned to phosphoric
acid, potash and nitrogen in commer-
cial fertilizers and are possibly some-
what too high from a practical stand-
point. Professor Roberts has suggest-
ed \$250 as a conservative estimate of
the value of the manure produced dur-
ing seven winter months on a small
farm carrying four horses, twenty
cows, fifty sheep and ten hogs.

If we assume that one-third of the
value of manure is annually lost by
present methods of management, and
this estimate is undoubtedly a conser-
vative one, the total loss from this
source in the United States, as indi-
cated by the first figures, would be
about \$708,400,000, or, using Roberts'
figures, the annual loss for each farm
would amount to \$83.33.

It should be clearly understood that
when the farmer sells meat, milk,
grain, hay, fruits, vegetables, etc., from
his farm, or neglects to save and use
the manure produced, he removes from
his soil a certain amount of potash,
phosphoric acid and nitrogen that must
be restored sooner or later if produc-
tiveness is to be maintained.

Spring the Time to Haul.

Speaking of the loss of valuable ma-
nural constituents by leaching, fer-
mentation, etc., the Kansas station con-
cludes "that farmyard manure must
be hauled to the field in spring, other-
wise the loss of manure is sure to be
very great, the waste in six months
amounting to fully one-half of the
gross manure and nearly 40 per cent of
the nitrogen that it contained."

It is the prevailing opinion of chem-
ists as well as practical men that
where it is practicable it is best to ap-
ply manure and urine to the soil in
the freshest possible condition. The
fertilizing constituents of well rotted
manure are more quickly available to
plants, and the manure itself is less
bulky and easier to distribute. On the
other hand, fresh manure mixed with
the soil readily undergoes a fermenta-
tion which not only increases the avail-
ability of its own fertilizing consti-
tuents, but also assists in rendering
soluble the hitherto insoluble fertiliz-
ing constituents of the soil. In fact,
even with special precautions to pre-
vent injurious fermentation under the
feet of the animals and in the heap,
the greatest return is likely to be got
from manure applied in the fresh con-
dition.

Methods of Applying Manure.

In applying manure to the field three
methods are pursued: First, the ma-
nure is placed in larger or smaller
heaps over the field and allowed to re-
main some time before being spread;
second, it is broadcasted and allowed
to lie on the surface for some time or
plowed in immediately, and, third, it
is applied in the hill or drill with the
seed.

It has been the general experience
that probably the best way to utilize
barnyard manure is in combination
with such materials as supplement and
conserve its fertilizing constituents.
Certain substances, such as kainit and
superphosphate, which are sometimes
employed as preservatives, may also
be used to advantage to improve the
fertilizing value of the manure, but it
is necessary to do more than this if a
well balanced fertilizer is desired, for,
as has been shown, barnyard manure
considered simply as a supplier of ni-
trogen, phosphoric acid and potash is
comparatively poor.

Should Be Saved and Used.

Summarizing the experience of ob-
servation in the use of barnyard ma-
nure, it may be said that it is the most
important manural resource of the
farm and should be carefully saved
and used. It represents fertility,
which is drawn from the soil and
must be returned to it if productiv-
ness is to be maintained. It not only
enriches the soil with the nitrogen,
phosphoric acid and potash, but it also
renders the stored up materials of the
soil more available, improves the me-
chanical condition of the soil, makes it
warmer and enables it to retain more
moisture.

The urine is by far the most valu-
able part of the excreta of animals. It
is especially rich in readily available
nitrogen, which rapidly escapes into
the air if special precautions are not
taken to prevent its loss. It is also

rich in potash, but deficient in phos-
phoric acid. It should, as a rule, be
used in connection with the solid dung,
the one thus supplying the deficiencies
of the other and making a more evenly
balanced manure.

Barnyard manure is a very variable
substance, its composition and value
depending mainly upon (1) age and
kind of animal, (2) quantity and qual-
ity of food, (3) proportion of litter and
(4) method of management and age.
Ordinary barnyard manure properly
cared for may be assumed to contain
on the average one-half per cent each
of nitrogen and potash and one-third
per cent of phosphoric acid.

Mature animals, neither gaining nor
losing weight, excrete practically all
the fertilizing constituents consumed
in the food. Growing animals may
excrete as little as 50 per cent of the
fertilizing constituents of the food,
milk cows excrete from 65 to 85 per
cent and fattening or working animals
from 85 to 95 per cent. As regards
the fertilizing value of equal weights
of manure in its normal condition,
farm animals probably stand in the
following order: Poultry, sheep, pigs,
horses and cows.

The amounts of fertilizing consti-
tuents in the manure stand in direct
relation to those in the food. As regards
the value of manure produced, the con-
centrated feeding stuffs, such as meat
scrap, cottonseed meal, linseed meal
and wheat bran, stand first; the le-
guminous plants (clover, peas, etc.) sec-
ond; the grasses third; cereals (oats,
corn, etc.) fourth, and root crops, such
as turnips, beets and mangel wurzels,
last.

The nitrogen of the food exerts a
greater influence on the quality of the
manure than any other constituent. It
is the most costly fertilizing consti-
tuent. It undergoes more modification
in the animal stomach than the mi-
neral constituents (potash and phos-
phoric acid) and rapidly escapes from
the manure in fermentation. The se-
cretion of urine increases with the in-
crease of nitrogenous substances in the
food, thus necessitating the use of larger
amounts of litter and affecting both
the amount and value of the manure.
The use of watery foods, as is obvious,
produces the same result.

Barnyard manure rapidly undergoes
change. When practicable to remove
the manure and spread it on the field
at short intervals the losses of valu-
able constituents need not be very great.



LOADING MANURE WAGON WITH TROLLEY
FROM BARN TO WAGON.

but when the manure must be stored for
some time the difficulties of pres-
ervation are greatly increased.

The deterioration of manure results
from two chief causes, (a) fermenta-
tion, whereby nitrogen, either as am-
monia or in the gaseous state, is set
free, and (b) weathering or leaching,
which involves a loss of the soluble
fertilizing constituents. The loss from
destructive fermentation may be large-
ly prevented by the use of proper ab-
sorbents and by keeping the manure
moist and compact. Loss from leach-
ing may be prevented by storage under
cover or in water tight pits. Ex-
tremes of moisture and temperature
are to be avoided, and uniform and
moderate fermentation is the object to
be sought. To this end it is advisable
to mix the manure from the different
animals thoroughly in the heap.

Effect of Fresh Manure.

Where improvement of the mecha-
nical condition of the soil is the prin-
cipal object sought fresh manure is best
adapted for this purpose to heavy soils
and well rotted manure to light soils.
Where prompt action of the fertilizing
constituents is desired the best results
will probably be obtained by applying
fresh manure to the light soils, al-
though excessive applications in this
case should be avoided on account of
the danger of "burning out" of the soil
in dry seasons. Fresh manure has a
forcing effect and is better suited to
early garden truck, grasses and forage
plants than to plants grown for seed,
such as cereals, or to fruits. Direct
applications to root crops, such as sug-
ar beets and potatoes, or to tobacco
often prove injurious. The manure
should be spread when carried to the
field and not left in heaps to leach.

The rate of application must be de-
termined by individual circumstances.
As a rule it is better to manure light-
ly and frequently than to apply a large
amount at longer intervals.

One of the best ways to utilize bar-
nyard manure is to apply it in con-
nection with such fertilizing materials
as supplement its fertilizing constituents.
These materials may be either com-
posted with the manure or used sepa-
rately, except in case of a sulfate,
such as nitrate of soda, which should
never be composted with barnyard ma-
nure on account of danger of denitrifi-
cation and loss of nitrogen. As is well
known, barnyard manure is lasting in
its effects and in many cases need not
be applied so frequently as the more
soluble and quick acting superphos-
phates and potash and nitrogen salts.

BON KAMA PURE BRED IMPORTED SHIRE STALLION

COPY. STATION
REGISTRATION
BOARD STATE
OF OREGON

License Certificate of
PURE BRED
Stallion No. 1376

BON KAMA

Stallion No. 13742
A Beautiful Bay
Stallion of the real
Draft Horse type,
6 yrs. old, weighs
2000 lbs. and has
splendid style and
action.

TERMS: To insure
Mare with
Foal \$20, Season \$15

Will Make the Season of 1913 at the Hartman
Ranch, 2 1-2 miles north of Condon

E. H. HARTMAN, OWNER AND KEEPER

Dated at Corvallis, Oregon, March 3,
1913. The pedigree of the stallion Bon
Kama No. 13742 American, 27072 For-
eign, registered in the studbook of The
American Shire Horse Association
owned by E. H. Hartman, Condon, Gil-
liam Co., Oregon, bred by T. H. Ver-
gette, Brown's Hospital, Newboro',
Peterborough, England. Described as
follows: Bay; stripes in face; off fore
leg and near hind leg white. Pedigree:
Sire Boro' Senator 2139, sire of sire
Lockinge Harold 16779, dam of sire
Boro' Model III 32341; dam Bon Bianca
23012, sire of dam Eastern Harold 12898,
dam of dam Bon Zita 17830. Breed
SHIRE, foaled in the year 1906, has
been examined by the Stallion Regis-
tration Board of Oregon, and it is here-
by certified that the said stallion is of
PURE BREEDING, is regis-
tered in the studbook that is recognized
by the associations named in section
nine of an Act of the Legislative As-
sembly of the State of Oregon providing
for the licensing of stallions, etc., filed
in the office of the Secretary of State,
February 23, 1911, and that the above
named stallion has been examined by
the veterinarian appointed by the
Stallion Registration Board and is here-
by reported free from infectious, con-
tagious or transmissible diseases or
unsoundness and is hereby licensed to
stand for public service in the State of
Oregon.
ERNEST L. POTTER,
Sec'y Stallion Registration Board.

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certainly last a long time"**

"I have had this wagon twenty-two years, and
during that time it cost me only \$6.00 for repairs, and
that was for setting two tires."

"And after twenty-two years of daily use in good
and bad weather and over all kinds of roads, I will
put this wagon against any new wagon of another
make that you can buy today."

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are subjected to a laboratory test to insure wearing
qualities."

"No wagon made is subjected to as many tests or is more
carefully made than a Studebaker. You can buy them of Stude-
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wagon, represented to be 'just as good' as a Studebaker."

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of the same high standard as the Studebaker vehicles.

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Fairy Ally

No. 45775

Sired by Alcone, 2.31 1-4, who was sired by
Alycone. First dam, Fairy Tale; Second dam,
Lady France.

**Only Standard Bred
Stallion in Gilliam County**

FAIRY ALLY is a beautiful dark bay Stallion, seven
years old, weighs 1100 pounds and is a sure foal getter.
He has a very kind disposition and is one of the gentlest
drivers. If you want to drive the best and fastest stock
don't overlook the opportunity of breeding to Fairy Ally.

Fairy Ally will stand the season of 1913 in Con-
don and Pine Ridge—in Condon on Friday and
Saturday of each week at Portwood's barn and
the balance of the week at Pine Ridge.

**TERMS: \$15 for Insurance,
\$10 for the Season**

Mares will be pastured at \$1.50 per month

CRAWFORD & LYONS, Owners
T. S. LYONS, MANAGER, CONDON, ORE.