

Q. How long can semen be held before inseminating the hens?

A. Artificially inseminate the hens as soon as possible after collecting semen. The time that semen can be held varies. Inseminate the semen within 30 minutes. In some experiments, good fertility has been obtained with semen held as long as 4 hours.

Q. How much help is needed?

A. From 4 to 12 people. With a crew of 4, all will collect semen part of the time, inseminate hens part of the time. With 8 or 9, one crew of 4 or 5 can collect semen while the rest are inseminating hens. With a crew of 12, 4 or 5 can collect semen, 2 can inseminate hens, and the rest can handle hens.

Q. How many turkeys can be inseminated per hour?

A. It will vary with the amount and efficiency of help, weather, and physical set-up. The following rates of efficiency can be obtained with experience. These rates include collecting semen and inseminating the hens: 4-man crew—150 hens per hour, 8-man crew—250 to 300 hens per hour, 12-man crew—400 to 500 hens per hour.

Q. How much does it cost per hen per season?

A. Three or four inseminations per season would cost from 10 to 25 cents per hen per season, depending on efficiency of help and the number of birds.

Q. Can semen be collected from toms running with hens?

A. Yes, but toms should be separated from hens 2 to 4 days before collecting semen. Toms that have not been with hens are easier to milk and usually yield more semen.

Q. What equipment is needed?

A. One 1 cc. glass tuberculin syringe graduated in 1/100 cc., one whiskey jigger with rounded bottom, and two or three 5 to 10 cc. glass vials or bottles. The semen is ejaculated into the whiskey jigger, drawn out with syringe after each ejaculation, and put in the glass bottles.

Q. Can Beltsville Whites be inseminated?

A. Yes. At Oregon State College, a group of Beltsville hens that were fertilized by artificial insemination averaged over 95 per cent fertility.

Q. Can artificial insemination be used to prevent the usual late season decline in fertility?

A. We have noticed the seasonal decline in fertility with both naturally mated turkeys and those inseminated artificially. In some flocks in which fertility is low during the latter part of the season, say 70 per cent or lower, artificial insemination may result in an increase in fertility, but probably will not be as high as early season fertility from artificially inseminated turkeys.

Q. Is there any particular time of day that is best for artificial insemination of turkeys?

A. It is preferred to inseminate turkey hens in the afternoon. Results at Oregon State College show that fertility is a little better when hens are inseminated in the afternoon.

Q. Will there be hens that cannot be artificially inseminated?

A. Yes, there will be a few because their oviducts cannot be everted. At the first of the season you will not be able to inseminate some of the slower developing hens. Later in the season, it will be difficult or impossible to inseminate some of the broodies and those that have stopped laying.

Early in the season some hens may be found that have the opening of the oviduct closed by a thin membrane. Although we have been successful in fertilizing these hens by forcing the syringe through the membrane, we are skeptical about recommending the practice. The membrane is usually ruptured or destroyed naturally before egg laying begins.

Q. Will artificial insemination have a harmful effect on rate of lay?

A. We have not found that artificial insemination has any noticeable effect on rate of lay. If the hens are handled carefully and not kept away from feed and nests for too long, no decrease in rate of lay should result.

Q. Do toms used for collecting semen require special feeding?

A. No, but it will help to obtain clean semen if only whole grains and no mash or green feed are fed for 24 hours prior to collecting semen.

Questions and Answers on ARTIFICIAL INSEMINATION of Turkeys



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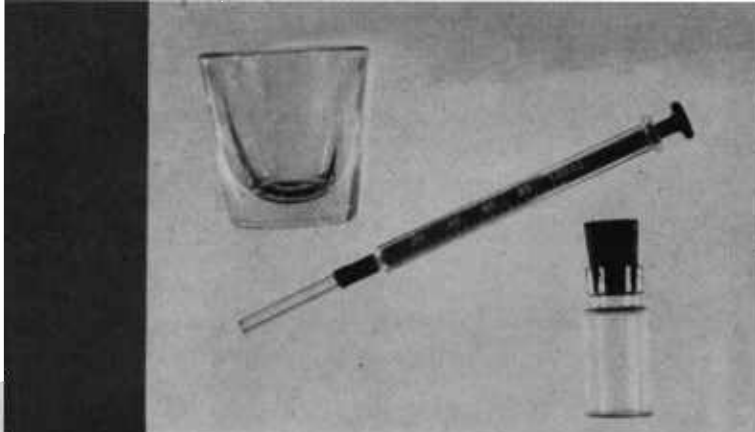
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Artificial Insemination Increases Fertility in Turkeys

Q. Is artificial insemination of turkeys practical?

A. Yes. It is practical in healthy turkey flocks in which natural fertility is less than 80 per cent early in the season and less than 70 per cent late in the season.

Q. Is artificial insemination the complete answer to the infertility problem of broad breasted turkeys?

A. No. Improvement of fertility through breeding is the more satisfactory solution to the problem—but this is a long time job and artificial insemination may be looked upon as a "stop-gap" until more fertile broad breasted turkeys are generally available.

Q. How much improvement in fertility can be expected through artificial insemination?

A. Fertility increases from artificial insemination will be more spectacular when natural fertility is low. When early season natural fertility is 50 to 60 per cent, increases of 20 or even 30 per cent might be obtained. But when initial natural fertility is 75 to 80 per cent an increase of around 10 per cent is more likely—provided the technique is efficient.

Q. Are there any other advantages of artificial insemination?

A. Some turkey breeders, who have used artificial insemination exclusively, report their hens and toms were in better condition when marketed at the end of the breeding season.

Q. Which would you recommend—artificial insemination as the only means of fertilizing the hens, or artificial insemination as a supplement to natural mating?

A. Until there are more people with training and experience, artificial insemination should be used as a supplement to natural mating. When you have become expert you can rely more on artificial insemination.

Q. How will I know when I have become an expert?

A. Set up a small pen of 25 to 50 unmated turkey hens and use artificial insemination as the only means of inseminating hens. Keep their eggs separate from others and have them incubated.

Top photo shows equipment required for artificial insemination. Collect semen in "whiskey jigger," then hold semen in a 3 to 10 cubic centimeter (cc.) glass bottle. Syringe (1 cc., graduated in hundredths cc.) is equipped with glass extension tube and rubber sleeve for inseminating hens. Syringe also is used for transferring semen from jigger to bottle after each collection.

Left two pictures below show collecting semen from tom. Next picture shows artificial insemination of turkey hen. Picture at right shows everted oviduct of hen just before insemination.

When there is consistent 85 to 90 per cent fertility, consider yourself expert.

Q. Is it hard to learn artificial insemination techniques?

A. For some yes, for others no. Collecting semen from toms is the most difficult to learn. Inseminating turkeys artificially is hard work, and requires workers who are in good physical condition.

Q. Where can I learn to inseminate turkeys?

A. You can have an expert show you. A verbal description on the technique of collecting semen and inseminating the hens would be too lengthy. The illustrations included will be helpful.

Q. How often do turkey hens need to be artificially inseminated for good results?

A. Once every 3 weeks. Although some turkey hens may remain fertile for as long as 60 days following one insemination, artificial inseminations should be made at 3-week intervals for best results.

Q. How often can you collect semen from toms?

A. Once every 2 days. This is recommended for routine collections.

Q. How many hens can I inseminate with the semen collected from one tom at one time?

A. Six to ten hens. The average volume of semen per collection is usually from .3 to .4 cubic centimeters. The recommended dosage is .03 cc. of semen.

