

# Detailed Overview of EBV Submission Procedure for NSIP

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(reviewed by Roxanne Newton, Jim Morgan, Michelle Canfield)

1. Join NSIP
  - ◆ Print the membership form (at [nsip.org](http://nsip.org)), fill it out and send with a check to cover the yearly flock fee (based on number of ewes) to the NSIP office in Iowa (address on form).
2. Collect Data
  - ◆ Required data:
    - Sire and dam information – it is essential that you use the assigned LAMBPLAN number for stock that you purchase from other NSIP participants. Do not make any changes to an ID for a sheep which already has data in the system.
    - Birth weight – taken within 24 hours of birth; reported in pounds.
    - Weaning weights - taken on all the lambs on the same day, when lambs are 45-89 days of age, and when the average for the group is close to 60 days. LAMBPLAN automatically adjusts the weights based on the lamb's age the day it was weighed.
    - Birth type – number of lambs born, including stillbirths.
    - Reared type – number of lambs reared to weaning, including grafted lambs. Lambs that are artificially reared should be given a Reared Type value of “1”.
    - Contemporary or management group – lambs under common management should be coded the same; give each group their own code. Artificially reared lambs and wethers should each be given their own management code.
    - Post-weaning weight - Post-weaning weights are taken on all the lambs on the same day, when lambs are 91-150 days of age, and when the group average is close to 120 days. This weight is entered as an “Early post-weaning weight.”
  - ◆ Optional Data - Specific protocols are required to submit data for the following traits. Please contact the kNSIP coordinator for more information.
    - Fecal Egg Counts (FEC) – collected at weaning and post-weaning
    - Scrotal Circumference – measured at 150-240 days for Katahdins
    - Ultrasound Scan of loin eye (loin eye depth and back fat) -90-180 days of age
3. Download and install Pedigree Wizard
  - ◆ Software download will be sent to you via email from LAMBPLAN in Australia
  - ◆ Download & install Pedigree Wizard (requires a 32 bit Windows PC; or, if you have a 64 bit Windows PC, you must install a virtual machine that can emulate a 32-bit machine.
  - ◆ Your install file will only remain on the server for about 2 months, so do the download immediately even if you don't plan to input data right away.
  - ◆ **Note:** while Pedigree Wizard is the most common program, there are other programs, both freeware and purchased, that can be used for data management and can run on 64-bit computers. Please contact the kNSIP coordinator for more information.
4. Enter data collected above – see Quick Add Instructions for Pedigree Wizard for instructions.
5. Submit data to LAMBPLAN
  - ◆ Data can be submitted after birth weight, and/or 60 day and/or 120 day weights.
  - ◆ See Quick Add Instructions for Pedigree Wizard for instructions.
6. Receive LAMBPLAN Reports (EBVs) back from LAMBPLAN

7. Submit data fee
  - ◆ Data fee is paid on each animal one time for life;
  - ◆ An invoice will be sent from NSIP office;
  - ◆ Fee will be assessed only on animals with post 90 day data submission;
  - ◆ Up to 25% of lamb crop can be submitted as cull or commercial at the first post 90 day data submission on the sheep and no data fee is assessed. Once lambs are marked cull or commercial, EBVs will not be generated for that animal. See FAQs for more information.
8. Use information to make management and selection decisions
  - ◆ Choose rams to buy or lease to make continued genetic progress.
  - ◆ Decide which animals to cull or remove from your system.
  - ◆ Choose replacement animals which offer the potential for genetic improvement in your flock according to your breeding and management goals.
  - ◆ Help set sale prices.

#### **Additional Information:**

1. Contemporary groups
  - ◆ Good contemporary group structure is important and should include:
    - At least two sires per contemporary group with 20 lambs per sire.
    - Lambs born within 45 days and managed as a single group.
2. Accuracy
  - ◆ Receiving useful information often requires a couple of years of submission, in order to accumulate a large enough statistical sample size to give confident estimates of genetic potential. This process is accelerated with increased genetic linkages to other NSIP flocks.
  - ◆ Genetic linkages to other flocks in the breed are necessary to help prove rams, to increase the accuracy of EBVs for lambs and ewes and for “across flock” EBVs.
    - Sharing, leasing or buying proven sires is best; or use sons of proven sires
    - Movement of ewes between flocks in NSIP has modest effect on strength of genetic connections
  - ◆ Without significant genetic connections, EBVs cannot be compared to other flocks in the breed and are considered “within flock” EBVs.
    - Large flocks with 150 or more ewes with good contemporary group structure can obtain useful within flock EBVs in a fairly short time.
    - Smaller flocks can obtain useful information, but it will take more years and closer genetic relationships to other flocks in NSIP
3. 16 Digit IDs – Each animal in LAMBPLAN is identified with a 16 digit ID
  - ◆ The 16 digit codes: Breed, Flock, Year of Birth, 6 digit unique ID
    - First two numbers identify the breed
    - Digit 3-6 identifies flock
    - Digit 7-10 identifies year of birth
    - Digit 11-16 is unique ID for animal
  - ◆ If an animal already has an ID number, it is essential to use that exact number.
4. Pedigrees
  - ◆ Don’t enter a ewe/dam in the pedigree of an animal unless the fellow littermates of the dam are also entered with required data
  - ◆ **NEVER** delete animals in Pedigree Wizard, even if they have died or been sold. Use the “Status” field on the main “Pedigree” page for the animal to note whether it has been sold, died, culled, missing, or is a reference-only animal. Only animals with a “current” status are included in EBV reports exported from Pedigree Wizard.