



Lost Lakes Woods Club 2015 Fall Camera Census Results

17 September, 2015

Ladies and Gentlemen of the Lost Lakes Woods Club,

What follows are the results of the 2015 fall whitetail camera census at LLWC and Whitetail Directives' final recommendations for harvest. The purpose of this census was to determine the herd dynamics at Lost Lake Woods Club, gather data on antler points by age class, and determine the fawn rate.

What information are we collecting in the fall?

Fall census data are used to determine all herd dynamics aside from recruitment rate, which is done in the spring. Census data include the following: Buck to Doe Ratio, Gender Based Age Structure, and Fawn Percentage. Recruitment data are also collected, but mostly for the purpose of validating spring data.

For those unfamiliar with what some of these data are please allow a brief explanation.

Buck to Doe Ratio: The number of does per buck in your herd. We often find buck to doe ratios between 1:5 and 1:7 in northeastern Michigan. This value tells you how hard your bucks have to work to ensure all does are bred, which determines how long your rut will be. The longer the rut the more stress will be put on your herd, and the higher the winter mortality will be.

Gender Based Age Structure: This is set of data often presented in graphic form to illustrate what percentage of your herd is, for example, 2.5 year old does vs. 2.5 year old bucks. These data are shown through all age classes 1.5 through 6.5+. Once a deer reaches 6.5 years old it becomes very difficult to distinguish its age outside of 'very mature.'

Fawn Percentage: This number tells you how many fawns you have per doe. We typically assume each doe gave birth to an average of 1.5 fawns in the spring. The first week of June should show a fawn rate around 150%, meaning there is 1.5 fawns per doe. Due to the high mortality of fawns, mostly from predation (bears, bobcats, coyotes, eagles, etc.) your fawn percentage will be drastically lower by fall.

Recruitment Rate: The recruitment rate is a measure of how many of the most recent batch of offspring have been successfully raised into the typical breeding age of the species. In whitetail deer yearlings (one year olds) are considered recruits. Though fawns are occasionally bred it is rare, and only happens in extreme and often peak herd and habitat conditions. Lactating yearling deer have shown up in past harvest records at LLWC, and they would have been bred as fawns, but in the best free range circumstances only a small percentage of that age class will participate in the rut. Sometimes fawns born early in the year will reach appropriate size to

participate in the rut, but because of the rarity and inconsistency of fawn breeding they are not considered recruits. This rate is often presented as a percentage. For most management applications in this area we like to work to achieve a recruitment rate of at least 50%.

Methods.

On Tuesday August 25th Whitetail Directives set up 26 trail cameras throughout LLWC for the purpose of collecting a sample of herd dynamics data. Cameras were set to run 24/7, taking a three shot burst of photos every time the trigger was tripped (1 second between pictures in a burst), but no more than one burst per two minutes. Cameras were set on well used trails within fifty yards of food or water sources, as well a small sample of food plots. Cameras were left for twelve days, though most studies show a ten day period is sufficient to sample all deer within the home range area surrounding said camera.

Cameras were collected on September 6th. One photo from each of the 3 shot bursts was used for data collection, resulting in 6 to 395 pictures used per camera, with a total of 1,902 deer pictures used in calculations.

Results.

The fall 2015 camera census yielded the following deer data:

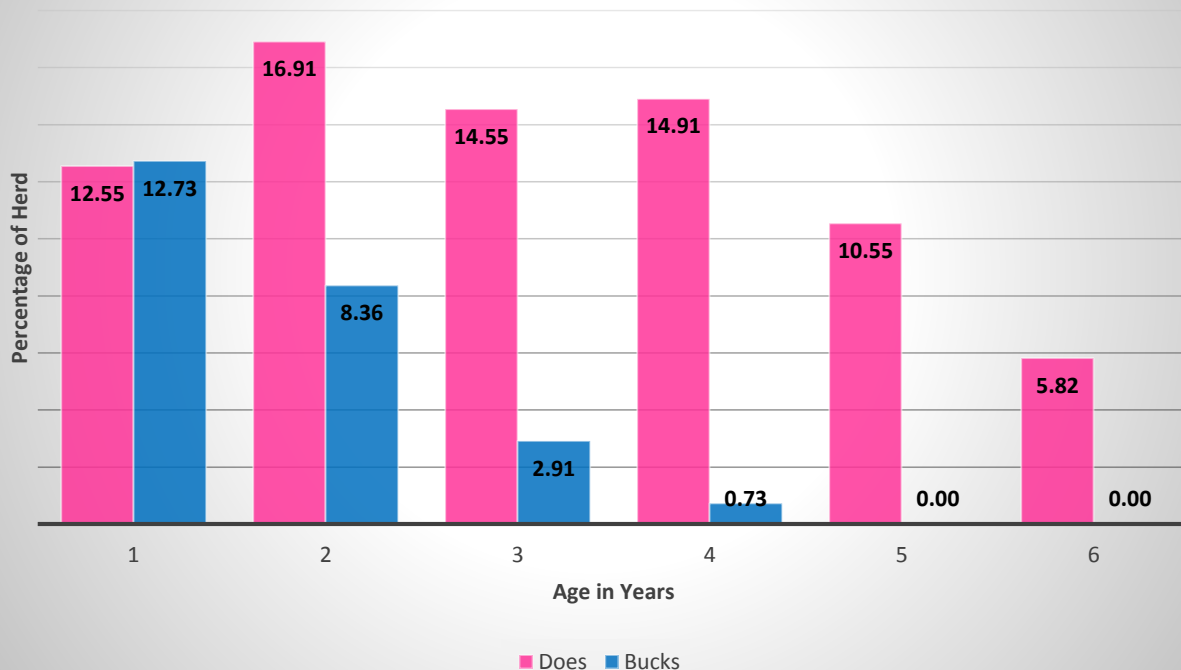
Recruitment rate: 40.3%

Fawn Percentage: 65.6%

Buck to Doe Ratio: 1 buck : 3.04 does.

Gender based age ratios:

Lost Lakes Woods Club Herd Demographics Fall 2015



Discussion.

Concerning a recruitment rate of 40.3%, this is an increase from the spring recruitment rate of 30.4%, which is higher than what we consider the average for northeast Michigan (15%-20%) on unmanaged land. However, when trying to build a deer herd to higher numbers it will be vital to monitor this number and make all efforts possible to raise it. Initially we will be aiming for a 50%+ recruitment rate, which will allow for increasing herd numbers, increasing antler size, and increasing harvest recommendations.

A buck to doe ratio of 1:3.04 is a great number anywhere in the state and should be maintained or slightly reduced if possible (targeting 1:2). The spring census produced a 1:3.4 buck to doe ratio, meaning the fall census validated the spring numbers.

Now to examine the gender based age ratios from two standpoints: 1, growing your herd (established goal); 2, increasing antler size (much discussed topic).

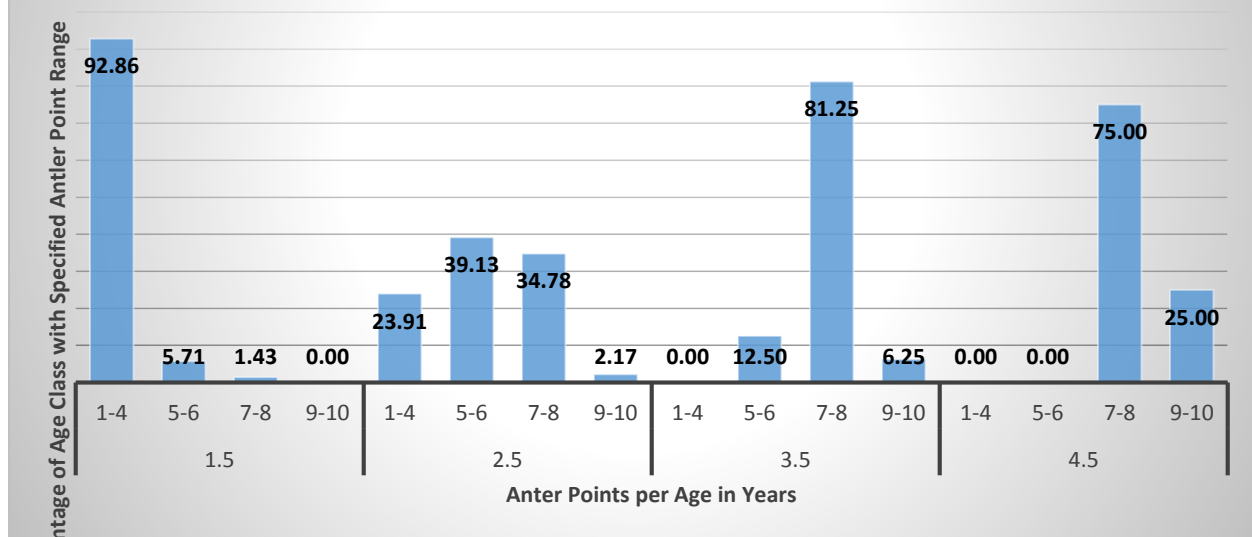
From reading previous recommendations and harvest data the doe harvest goal has been near 100 antlerless deer per year. The fall census numbers are nearly identical to the spring numbers, which gives us great confidence in sticking with our preliminary doe harvest recommendation of 25.

In order to reach the goal of increasing the overall size of the deer herd at LLWC we will need all the does to be producing at even levels while maintaining the current buck to doe ratio or better. We understand you have to have a deer season, and harvesting does is important for success in young hunters and overall hunter satisfaction. On the other hand, you have to have does to produce the fawns necessary to reach the goal of a larger herd. Therefore, keeping your doe harvest to a minimum will be important in increasing herd numbers. If LLWC maintains the past harvest criteria of 100 you will shoot your herd out and hunter satisfaction will drop off and take many years to recover. Our recommendation of 25 does may be a shock to the current harvest expectations, but maintaining lower harvest for a couple years will grow your herd. Conversely, sticking with higher harvest numbers will crash your herd over the next few years, lowering satisfaction, then maintaining low hunter satisfaction during the course of time it takes to rebuild.

Considering how many people want to harvest an animal with antlers we must also consider ways to increase the buck herd. To maintain the current buck to doe ratio you would have to have mortality rates (winter kill, hunter harvest, predation, etc.) of the same ratio. If you want to increase herd numbers it would likely lower hunter satisfaction if they were seeing only one buck per dozen does. That being the case Whitetail Directives recommends sticking with the preliminary buck harvest recommendation of no more than 10 bucks. Without limits on buck harvest the LLWC herd will get to a point where existing bucks are struggling to breed all the does, lowering fawn counts and recruitment rates, and skewing gender based age structure to old does and young bucks; the opposite of what most people are looking for. Simultaneously, if you are looking to increase herd numbers we must work to sustain the existing doe herd and see they are all bred, leading to a further decrease in available bucks for harvest. It should be understood that such extreme limits on buck and doe harvest are likely short term (estimating 3 years), while the herd develops. You will never have as much control over your future herd as you do when it is small. This is the time to let bucks grow up, and if an interest arises for antler size management we can discuss what specific deer should and should not be harvested.

As a part of this census antler points were recorded per age class of buck, and we found some interesting results. The following is a breakdown of antler point percentages per age class of buck from the fall 2015 census.

Lost Lake Woods Club Antler Points Per Age Class Fall 2015



Studies show yearling antler points are not good predictors of future antler size, meaning a yearling spike could grow into a trophy deer, while a yearling 8 point might not hit 100 Boone & Crockett inches at 5.5 years old.

The two year old age class is very interesting. Over 63% of your 2.5 year old bucks are 6 points or less. That information is a bit concerning. The 5-6 point range alone makes up 39.13% of LLWC's 2.5 year old bucks. What this tells us is that LLWC's deer are heavy in genetics for 6 points or less. Often a lack of nutrition or skewed buck to doe ratios can cause poor buck health resulting in such high percentages of 6 points or less in the 2.5 year age class, but LLWC's forest management program and growing food plots provide a great amount of nutrition, and the buck to doe ratio is in good shape. This leaves us with the genetic option. On a positive note, at least 2% of the 2.5 year olds have 9-10 points.

The three year old age class looks a bit better, with over 81% of bucks having 7-8 points, and over 6% have 9-10 points.

The few 4.5 year old bucks observed (0.73% of the herd) are at least 7 points, with a good percentage in the 9-10 point range.

LLWC and Whitetail Directives have spoken multiple times on the various options available for antler point restrictions. After seeing these data our recommendation is to maintain a 3 points to a side rule. As previously stated, there seems to be a predisposition for the '6 point buck' at LLWC. If antler restrictions were set at 4 to a side you would be damaging the already lower than desirable '8 point gene pool.' By keeping a 3 points to a side restriction some of your hunters will harvest those less than desirable genes and more of the 8 point gene will stay out there to reproduce.

To take things one step further and step outside the goal of increasing herd size we would like to make the following suggestion. If you are interested in increasing antler size. As previously mentioned, because LLWC wants to increase herd numbers we can assume the current herd is the smallest it will ever be, therefore you will never have as much control over your herd and its genetics as you do now. If you foresee a desire for larger antlers we suggest a TEMPORARY restriction of 'no buck with 5 points to a side.' The data show the '10 point gene' is present in your herd, and the fact that it shows up in the 2.5 year olds is fantastic. If you preserve these deer now they will help you grow a herd with more 10 points in it. The unfortunate part of antler size management is that those people who want to shoot larger deer need to let the larger ones live for a while or those genetics will be lost. The duration of such a restriction is dependent on the commitment of LLWC as a whole. If it is adhered to in conjunction with the rest of the harvest recommendations it could have great effect in 3 years. That is not to say all your bucks would be 10 points, but if you could increase the 2.5 year old 10 points to 10%, and the 3.5 and older to 20% it would be incredibly noticeable, and provide a substantial amount of 10 point genes helping to develop your growing herd.

In Conclusion.

The deer herd dynamics of LLWC is in better condition than most places we have worked, though at a lower overall population than the land can support. The fall census has backed up what we saw in the spring and given us great confidence in the recommendations. With the current numbers we can say the buck to doe ratio is wonderful and we should work to maintain it. Improvement is possible, but not necessary. Lost Lakes Woods Club has the habitat capable of supporting a larger deer herd and better antler quality, it will just take a little work, patience and cooperation to get there.

We understand that these recommendations are quite different than what LLWC has been doing the last few years. We also understand that these recommendations may not fit with what the club must do to maintain membership and hunter satisfaction, therefore changes may need to be made. In general, however, it should be understood that maintaining past harvest numbers will cause a crash in your herd. If you wish to maintain current herd numbers (not grow or shrink the herd) you would still require a reduction in harvest quotas, and the limited harvest would still need to be in proper gender ratios. If LLWC want to stick to the goal of growing the herd, the reduction in harvest must be substantial.

Amended to this report are a number of pictures of some of the best bucks we saw on camera. Unfortunately one of our cameras was deliberately covered with ferns to block its view. No damage was done to the camera, but blockage did reduce data collection to the slight detriment of this survey. Fortunately, enough data were provided to give us great confidence in our numbers and recommendations.

In addition to the evaluation of herd dynamics we recommend you continue to develop food plots and suggest we work together to improve existing plots in lieu of new construction. As stated, your forest management program is fantastic and providing great levels of high quality winter deer feed, but we suggest working to improve winter thermal cover across the property. Whitetail Directives will continue making regular visits and this topic will be one we will specifically target in future reports. Some methods may include the improving of existing stands (thinning mature trees not providing wind or snow protection), cedar regeneration cutting, and simply creating conifer stands through tree planting.

As we have discussed, data collection from deer harvests will be vital to verifying recommendations and management strategies are working. Detailed, and complete harvest data will also give us some important information we cannot gain from photographs (jaw bones for ageing, lactation data, dressed weight, antler score). Whitetail Directives staff will be present for the first few days of the firearm deer season to collect these data, but collecting information from every harvest is of the utmost importance. If there are any LLWC members or staff that would be willing to volunteer to help with this task please let us know. It would require about 2 hours of training that can be done at LLWC.

If there are any questions please let us know and we will be happy to help in any way.

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