

Eliminate Dog Culling

1. Motivation behind Research Paper

Have you ever seen a stray cat around your house or in a park? Have you ever seen the cat through to the end? I haven't seen it, but I have heard of it. The reason why I decided to research about the culling of dogs is that when I was in elementary school, there were many stray cats in the residential area where my house is located, but by the time I became a junior high school student, there were no cats left. It all started when I started researching where the cats had gone. My mother told me about shelters, and I learned for the first time that many stray animals other than cats were caught and killed. I've never seen a stray dog, but shelters caught dogs as much as cats. The number of caught animals and the number of culled animals are decreasing, but there are large differences between regions, and the current situation is that the numbers are not stable. So I formed a group called Rep0 and started researching to find out the root cause of why some animals are being euthanized.

2. Introduction

We wanted to help animals that will be euthanized, so we compared data from field surveys and the internet, and compared regions where euthanasia is common and regions where it is not. We started to research about three things that may

become a hint to eliminate culling. The first is the killing rate, the second is the transfer rate, and the third is the microchip. First, based on the data provided by the Ministry of the Environment, the culling rate was calculated by $[(\text{number of killings}) \div (\text{Protected numbers in shelters}) \times 100]$. We put out the culling rate in each area and compared which areas had high culling and which areas had low culling. The transfer rate was also calculated from the data of the Ministry of the Environment. $[(\text{number of transfers}) \div (\text{Protected numbers in shelters}) \times 100]$ Regarding microchip, since microchips became mandatory on June 1, 2022, we decided to see the future progress.

3. Results and Analysis

After comparing the culling rate, we noticed that even with the same culling rate 0, if the population parameters are different, we cannot compare them. For example if the population parameter is 0 and the culling rate is 0, it doesn't mean the city did it's best to make it 0. Then, the idea that "If the transfer event becomes active, all the dogs kept by the shelter will be transferred." Based on this idea, we hypothesized that the transfer rate is the number that shows the measures to reduce the local culling rate to 0. To find new information, we went to a shelter that mainly hosts adoption events. What we learned there was that since most shelters are run by individuals or volunteers, detailed information and data are not managed and no records remain. This is why we had a hard time finding hints to eliminate the culling. However, first, our group compared the culling rate and transfer rate in each region, and we believe that embedding microchips in pets will be a solution to the culling problem. We couldn't do anything about microchips because it was difficult for us,

but on June 1, 2020, when we were still investigating the culling rate and transfer rate, it became obligatory to embed microchips in pets.

4. Conclusion and Future Problems

Before the introduction of microchips, about 70% of new dogs were purchased from breeders and pet shops. It is believed that about 70% of dogs that are adopted from breeders or pet shops after June 1, 2022 will be identified because they are sold with microchips. It is hypothesized that 90% of dogs currently taken into shelters are unidentified, but that 90% of them will be identified in the decades following the introduction of microchips, and that the number of dogs that will be euthanized will decrease. From these facts, we thought that the number of unidentified dogs taken to shelters could be reduced, and microchips would lead to a decrease in culling. However, we do not know how effective the microchip will actually be, so we are planning to observe the progress in the future.

5. Reflection

After continuing the research for two years, I understand why culling has been regarded as a problem for many years. Make many hypotheses, verify them over and over again, and search for the root of the problem. No matter how many times I repeat this, I can't seem to find a solution. It turned out that it is difficult to solve the culling of dogs and cats, and there is not a method that can solve everything. From this experience, I was able to realize just how much we have to use our brains, cooperate with each other, and think about ourselves in order to achieve the 17 goals set out in the SDGs. In addition, I was able to know that the information on the

news and the information I heard from people were unreliable. From now on, I would like to take advantage of the experience of these two years and act proactively on current problems.

6. Work Cited

Ministry of the Environment: Statistical data "Acquisition of dogs and cats, accommodation and disposal of injured animals, etc." 1 Apr. 2020. to 31 Mar. 2021. Web. 22 Jun. 2021.