Every winter, drivers are threatened by hazardous icy roads. Among methods to prevent snow-related traffic accidents, the most common measure is road salt. However, the application of road salt causes many problems, such as its corrosion, as well as its harmful impacts on the environment. The negative effects of road salt necessitate an alternative solution to treating winter roads. Our plan involves inserting three AFP gene sequences into plasmids, transforming the plasmids into *Pichia pastoris*, and harvesting three AFPs from mealworms, plants, and arctic yeast genes. These AFPs adhere to the surface of newly formed ice crystals, inhibiting ice crystal formation in sub-zero temperatures. By harvesting the AFPs from yeast, we can apply the product as a cost-effective road salt alternative. This innovative solution addresses environmental concerns and uses a more eco-friendly approach. Testing this design's efficacy and safety will prove its feasibility as a replacement for road salt.