1. Date of First Snowfall, Date of Last Snowfall.

**Number of Days with Snow Cover**

*Mean Annual Maximum Depth of Snow Cover*

2. Date of First Frost, Date of Last Frost.

**Number of Days with Fog**

**Number of Days with Thunder or Lightning**

3. **Number of Days with Maximum Temperature Less Than 0°C**

**Number of Days with Minimum Temperature Less Than 0°C**

**Number of Days with Maximum Temperature Equal to or More Than 25°C**

**Number of Days with Maximum Temperature Equal to or More Than 30°C**

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1. **Date of First Snowfall, Date of Last Snowfall.**

   **Number of Days with Snow Cover.** *Mean Annual Maximum Depth of Snow Cover*

   In meteorological observations, any small amount of falling snow is recorded as snow. The period of the year during which snow is present is known as the snow season. The start and end of the snow season is determined by the date of first snowfall and the date of last snowfall, respectively.

   Snow cover represents a situation in which more than half of the ground surface is covered with snow. The day in which this situation prevails is known as a day with snow cover, whether snow is present on the day before or the day after that day.

   The snowfall season (when snowfall has occurred) in Japan is generally from November to March, but in mountainous areas, snowfall can occur as early as October and as late as April. Snowfall can vary significantly from year to year, influenced by factors such as temperature, humidity, and atmospheric pressure.

2. **Date of First Frost, Date of Last Frost.**

   **Number of Days with Fog.** **Number of Days with Thunder or Lightning**

   **Number of Days with Maximum Temperature Less Than 0°C.**

   **Number of Days with Minimum Temperature Less Than 0°C.**

   **Number of Days with Maximum Temperature Equal to or More Than 25°C.**

   **Number of Days with Maximum Temperature Equal to or More Than 30°C.**

   Radiation fog is a condensation of water vapor in the atmosphere which occurs from the cooling of the atmosphere, by the radiolysis and cooling of the ground. It is in contact with the ground surface. Advection fog is generated as the atmosphere is cooled by the cold water surface over which streams of air at the air mass. In contrast, fog is generated from the water surface, when streams of cold air flow over the warm water surface. This fog is a type of advection fog. Fog is generated in the proximity of a front and its cause is related to a rise in dew point. In most situations, fog is generated due to a number of factors, but not to a single factor.

   Fog is present in all snowy mountain areas, and there is fog throughout the year in the mountains and not limited to any particular season. In the season, fog appears yearly from fall to spring, while the coastal areas have fog mostly from spring to autumn.

2. **Number of Days with Thunder or Lightning**

   The powerful lightning current generated in a thunderstorm depends on the way the ascending air current is present, the thunderstorms are classified into heat thunderstorms, frontal thunderstorms, optical thunderstorms, and others. The heat thunderstorm is the kind of thunderstorm caused by thermal convection current, which is generated with the ground surface heated by the strong windward and with the air close to the ground surface reduced in weight. A frontal thunderstorm is generated, when the stream of warm air in front of a cold air is pushed upward by the cold air. A spiral thunderstorm is generated, as the converging air current is blocking in from around the sphere of the low pressure area or by the earth turns itself into an ascending air current at the center.

   The number of days with thunder or lightning is considered in days when bolts of lightning are recorded. The frequency of thunder or lightning may vary depending on the geographical location of the area. In particular, the heat thunderstorms are always on extremely localized phenomena.

   Areas with a large number of days with thunder or lightning include, among others, the plains on the west side of Tohoku Prefecture and the plains of Osaka Prefecture. In these districts, the number of days with thunder or lightning is generally greater in summer, particularly in the plains areas on the Pacific Ocean side.

   In the cities of Kamakura and Tokyo on the Japan Sea side, the number of days with thunder or lightning in the three months of December, January, and February accounts for about 15% of the annual total, so that thunder is winter is nothing unusual in this district. Practically, no thunder is generated on a winter day. In summer, however, many cases are reported in areas on the Pacific Coast, such as Ishikari and Aomori, and in summer, including Fuchu, Dazaifu and Koshikijima. Further south districts of Tohoku, the number is smaller. This is because dry seasonal winds, changing across the northern part of the Kantō Region, come in contact with a highly humid, warm air mass over the Pacific Ocean and become unstable, and as they go down farther to the sea as far as Tohoku, a large considered, the cold mass is formed.

   Rain sometimes accompanies a thunderstorm. The percentage of thundershowers turning into a hailsome is higher in May and June when the temperatures are fairly high and the temperature difference is considerable. It becomes higher, however, because summer thunder storms occur in other seasons in the frequency of thunderstorms. The humidity is a more localized phenomenon than the thunderstorms but inflicts great damage on fruit produce, particularly, tobacco, allium leaves and vegetables.

   The range indicating the date of first frost, the date of last frost, number of days with fog and number of days with thunder or lightning were prepared on the basis of the norms gathered from about 150 meteorological offices throughout the country.

   **Sources:**

3. **Number of Days with Maximum Temperature Less Than 9°C.** **Number of Days with Minimum Temperature Less Than 9°C.** **Number of Days with Maximum Temperature Equal to or More Than 25°C.** **Number of Days with Maximum Temperature Equal to or More Than 30°C.**

   The temperature is the most commonly accepted yardstick to indicate seasonally. Frequently used in the practice of indicating the climate of approximately at a given point with the number of days within a certain range of temperatures.

   A day with a maximum temperature recorded at less than 9°C is a very cold day in which the temperature does not go above 9°C all day. It is known as a roadday. The annual number of roaddays in terms of norm is 23 in Sapporo, 2 in Sendai, and 9 in Nagasaki. Practically no roaddays are recorded in areas along the coasts of the Pacific Ocean west to the Kantō Region and to the Seto Inland Sea.

   A day with a minimum temperature registered at less than 9°C is known as a winter day. A check of the daily fluctuations in the temperature of winter days reveals the temperature is below the freezing point at dawn and above the freezing point during most of the daylight. The annual number of winter days in terms of norm is 20 in Sapporo, 17 in Sendai, 11 in Nagasaki, 4 in Toki and 1 in Kagoshima, whereas not a single winter day has been recorded in Nagasaki.

   A day with a maximum temperature recorded at more than 30°C is known as a roadday and is said to start making its appearance in Toki when days may exceed 10°C in early summer comes to an end. The annual number of roaddays in terms of norm is 9 in Sapporo, 8 in Sendai, 16 in Nagasaki, 18 in Toki, 18 in Hiroshima, 19 in Kagoshima and 26 in Nagasaki.

   A day with a maximum temperature registered at more than 30°C is known as a roadday and starts making its appearance in Toki when days may exceed 10°C in early summer comes to an end. The annual number of roaddays in terms of norm is 9 in Sapporo, 8 in Sendai, 16 in Nagasaki, 18 in Toki, 18 in Hiroshima, 19 in Kagoshima and 26 in Nagasaki.

   The classification of days with specific temperatures includes, among others, a day with a minimum temperature equal to or more than 30°C. It is known as a tropical night. With the temperature rating above 25°C even at night, the day is usually referred to as a tropical night. The classification of tropical nights in terms of norm is 12 in Toki, 1 in Hiroshima, 18 in Kagoshima, and 27 in Sapporo, whereas no tropical nights are recorded in areas north of Sendai.

   The number of days was prepared on the basis of the norms available from about 180 meteorological offices throughout the country.

   **Sources:**