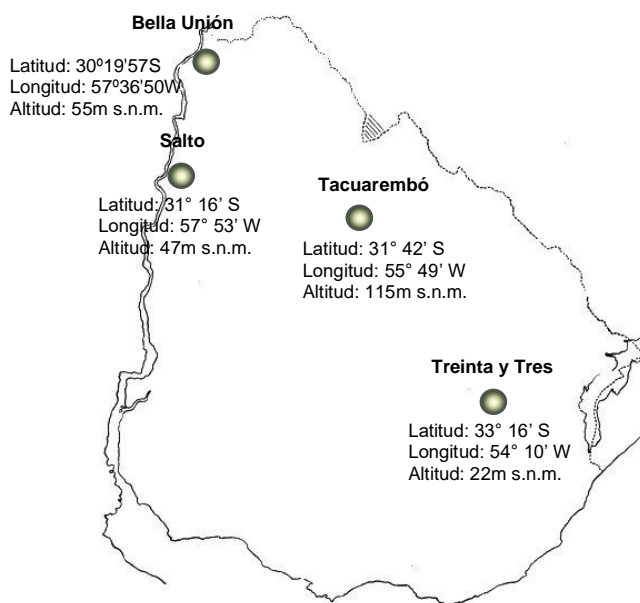


## Boletín Periódico Arroz Zafra 2021-2022



### Enero - 1ª década

#### ESTACIONES METEOROLÓGICAS:

- UNIDAD EXPERIMENTAL PASO DE LA LAGUNA – TREINTA Y TRES
- UNIDAD EXPERIMENTAL LA MAGNOLIA – TACUAREMBÓ
- INIA SALTO GRANDE – SALTO
- ALUR – BELLA UNIÓN - ARTIGAS

#### RESPONSABLES:

|                                  |  |
|----------------------------------|--|
| Agroclimatología:                | Ing. Agr., M.Sc., Ph.D. Alvaro Roel  |
| Lectores de datos:               | Sr. César Denis<br>Sr. Daniel Acosta<br>Sr. Mario Texeira                  |
| Procesamiento de datos:          | Sr. Matías Oxley – INIA T. y Tres<br>Sr. Marcelo Alfonso – INIA Tacuarembó |
| Diagramación y armado            | Sr. Matías Oxley – INIA T. y Tres  |
| Actualización Web                | Sr. Matías Oxley – INIA T. y Tres  |
| Información de ALUR:             | Ing. Agr. Fernando Hackembruch   |
| Director Programa Nacional Arroz | Ing. Agr., Ph.D. José Terra  |

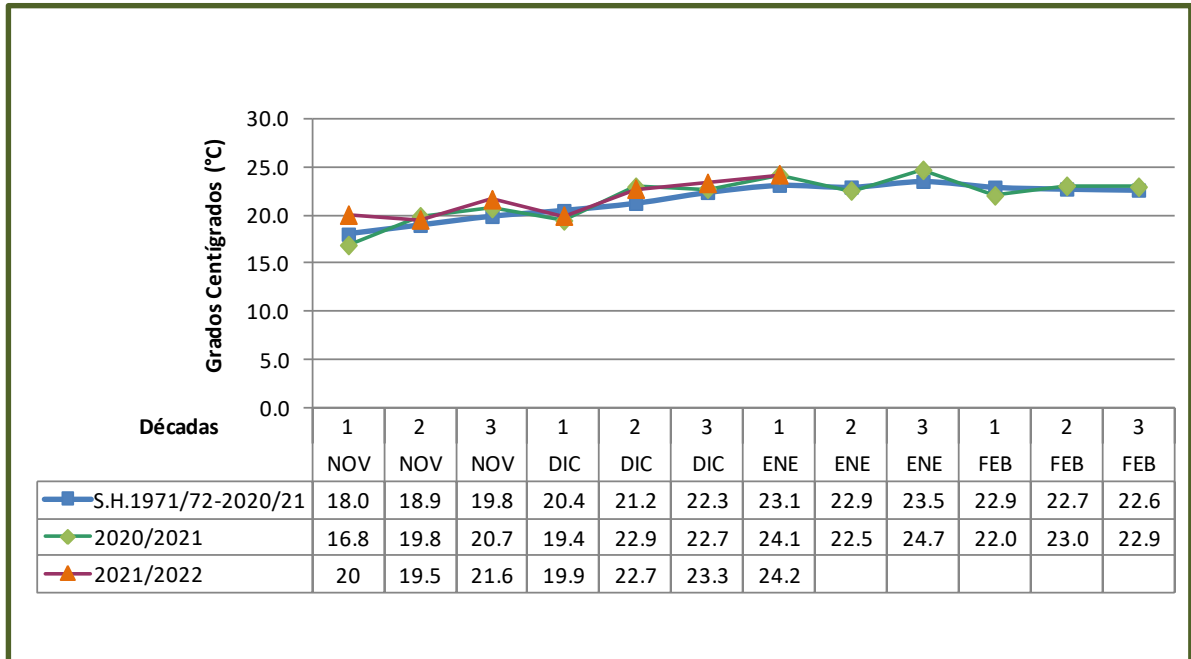
### TREINTA Y TRES

### TACUAREMBÓ

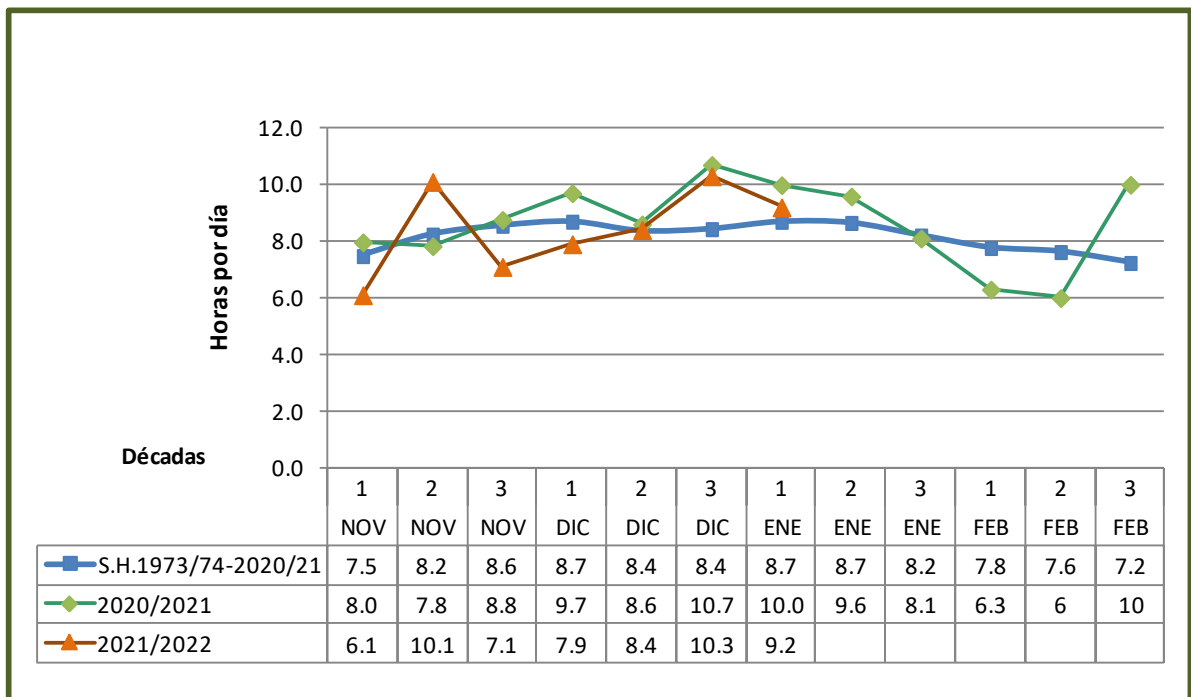
### SALTO

### ARTIGAS

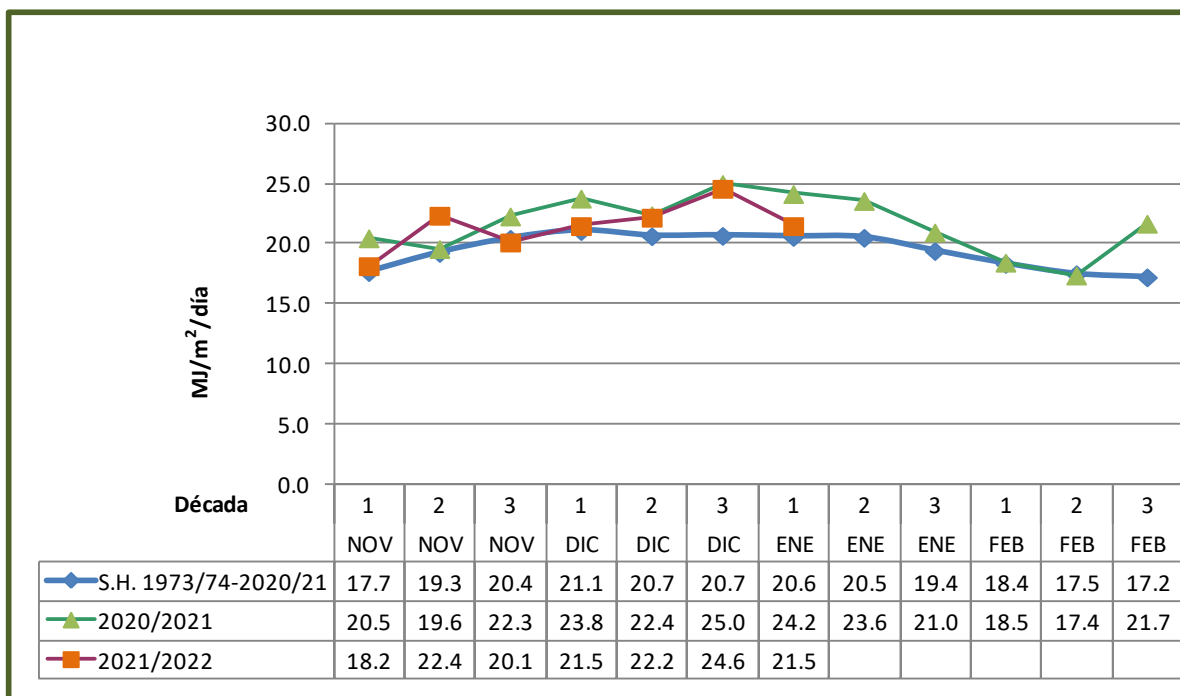
**TEMPERATURA MEDIA (Promedio cada 10 días) (\*)**



**HORAS DE SOL (Promedio cada 10 días) (\*)**

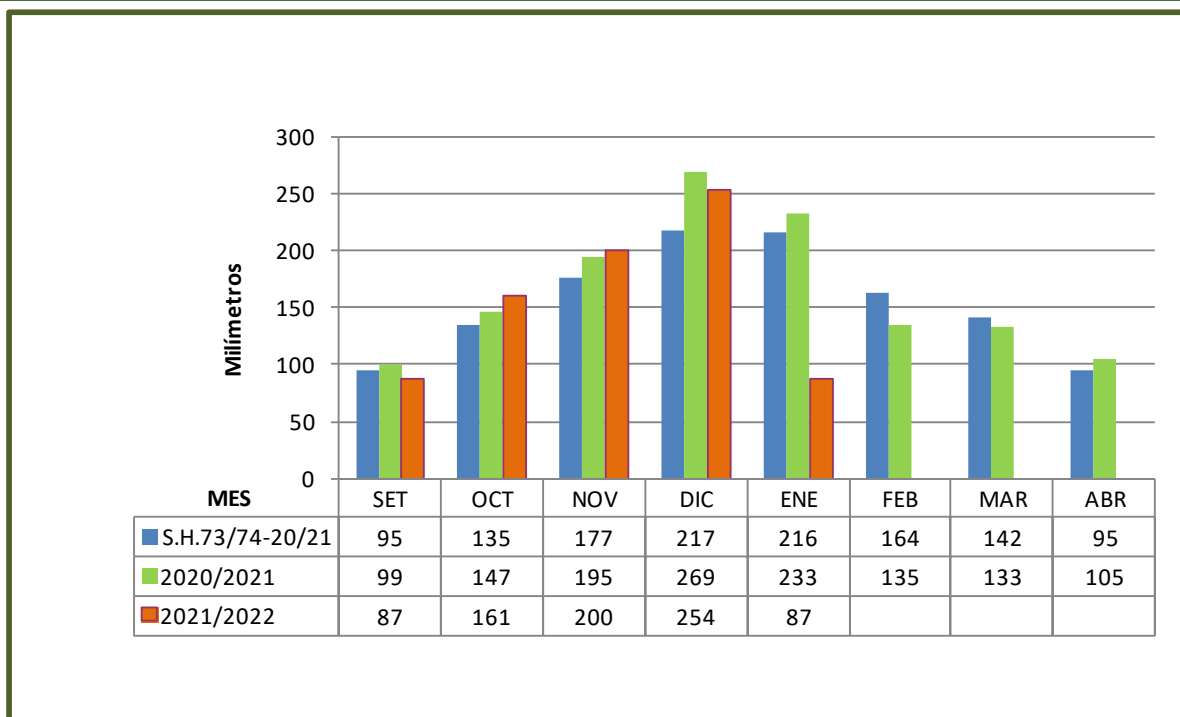


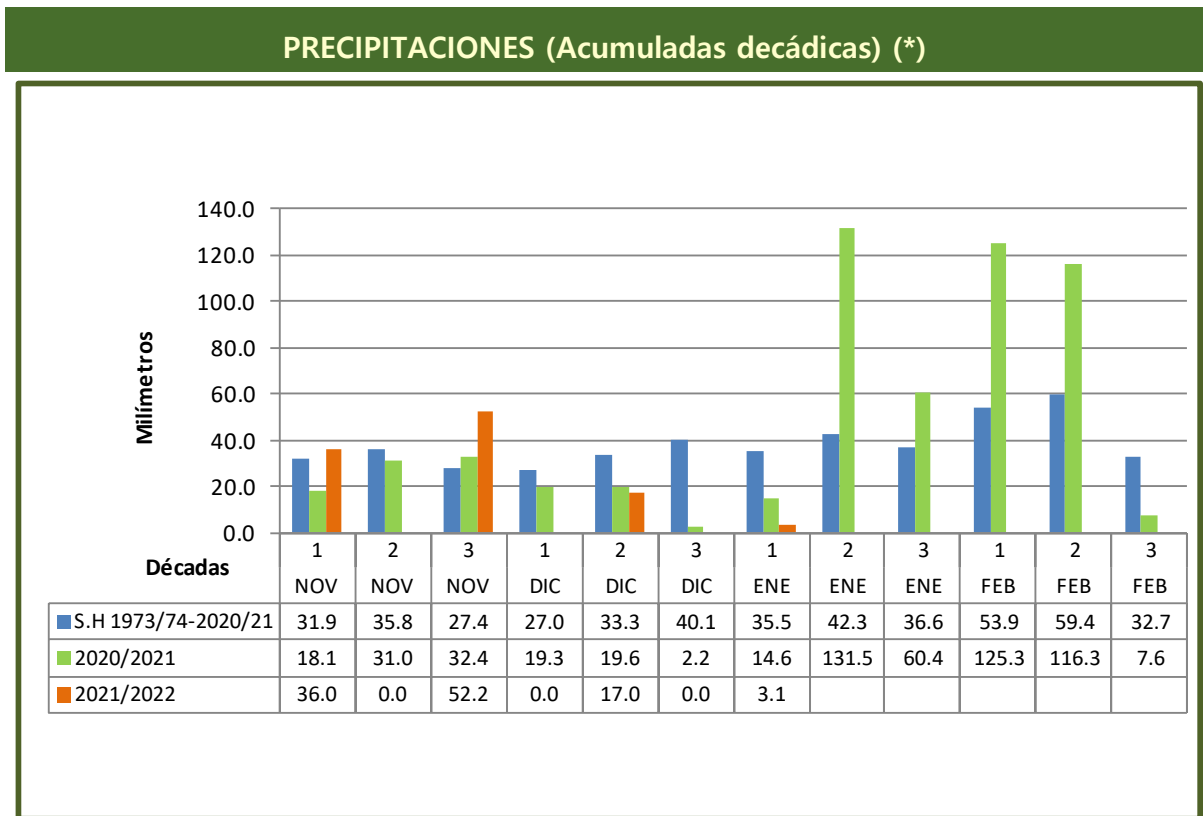
**RADIACIÓN SOLAR (Promedio cada 10 días) (\*)**



\*Datos de la presente zafra actualizados hasta el 10 de enero de 2022.

**EVAPORACIÓN TANQUE "A" (Acumulada mensual) (\*)**





\* Datos de la presente zafra acumulados hasta el 10 de enero de 2022.

## Unidad Experimental Paso de la Laguna – Treinta y Tres

| Número de días con temperatura mínima igual o inferior a 15 °C |          |          |          |          |          |          |          |          |          |          |          |          |
|--|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Día  | Enero    |          |          |          | Febrero  |          |          |          | Marzo    |          |          |          |
|  | 2019     | 2020     | 2021     | 2022     | 2019     | 2020     | 2021     | 2022     | 2019     | 2020     | 2021     | 2022     |
| 1  |          |          | 11.2     |          |          | 14.2     |          |          | 10.6     |          |          |          |
| 2  |          |          | 11.1     |          |          |          |          |          |          |          |          |          |
| 3  |          |          | 12.9     |          | 13.4     |          |          |          | 9.1      | 14.6     |          |          |
| 4  | 11       |          |          |          | 11.0     |          |          |          |          |          |          |          |
| 5  | 13.2     |          |          |          | 11.2     |          |          |          |          | 11.9     |          |          |
| 6  |          |          |          | 12.3     | 14.4     |          | 12.4     |          |          | 14.1     | 13.2     |          |
| 7  |          | 13.2     |          | 14.9     |          |          | 12.4     |          |          | 14.1     | 13.1     |          |
| 8  |          | 13.4     |          | 14.7     |          |          |          |          |          |          |          |          |
| 9  |          |          |          |          |          |          |          |          |          |          |          |          |
| 10   |          |          |          | 14.8     |          | 10.6     |          |          | 12.4     |          | 14.1     |          |
| <b>N° días</b>   | <b>2</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>4</b> | <b>2</b> | <b>2</b> | <b>0</b> | <b>3</b> | <b>4</b> | <b>3</b> | <b>0</b> |
| 11   |          |          |          |          |          |          |          |          | 12.2     |          | 12.1     |          |
| 12   |          |          |          |          | 14.0     |          |          |          |          |          | 14.3     |          |
| 13   |          | 12.6     | 11.1     |          | 9.7      |          |          |          |          |          |          |          |
| 14   |          |          | 13.1     |          | 14.1     |          |          |          |          |          | 10       |          |
| 15   |          |          |          |          |          |          |          |          |          |          | 11.6     |          |
| 16   |          | 12.2     |          |          | 12.6     |          |          |          |          | 10.6     | 14.8     |          |
| 17   |          | 9.2      |          |          |          |          |          |          |          | 9.6      |          |          |
| 18   |          | 11.4     | 14.6     |          |          |          |          |          |          |          |          |          |
| 19   |          |          | 13.2     |          |          |          |          |          | 14.8     |          | 9.7      |          |
| 20   |          |          | 14.8     |          |          |          |          |          | 13.1     |          |          |          |
| <b>N° días</b>   | <b>0</b> | <b>4</b> | <b>5</b> | <b>0</b> | <b>4</b> | <b>0</b> | <b>0</b> | <b>0</b> | <b>3</b> | <b>2</b> | <b>6</b> | <b>0</b> |
| 21   | 11.4     |          |          |          |          | 10.3     |          |          | 7.2      | 11.9     |          |          |
| 22   | 12.6     |          |          |          |          | 8.9      |          |          | 9.6      | 11.1     | 13.4     |          |
| 23   |          |          |          |          |          | 8.8      |          |          | 10.3     | 12       |          |          |
| 24   |          |          |          |          |          | 12.1     | 12       |          | 11.3     |          | 12.8     |          |
| 25   |          |          |          |          | 14.2     | 14.6     |          |          | 11.5     |          |          |          |
| 26   |          |          |          |          | 10.6     | 9.1      |          |          | 12.6     |          |          |          |
| 27   |          |          |          |          | 6.4      | 9        |          |          | 10.3     |          |          |          |
| 28   |          | 9.4      |          |          | 10.9     | 11.8     |          |          | 8.1      |          |          |          |
| 29   |          |          |          |          |          | 11.7     |          |          |          |          | 13.6     |          |
| 30   |          |          |          |          |          |          |          |          |          | 13.2     |          |          |
| 31   |          |          |          |          |          |          |          |          |          |          | 11.1     |          |
| <b>N° días</b>   | <b>2</b> | <b>1</b> | <b>0</b> | <b>0</b> | <b>4</b> | <b>9</b> | <b>1</b> | <b>0</b> | <b>8</b> | <b>4</b> | <b>4</b> | <b>0</b> |

# Unidad Experimental Paso de la Laguna – Treinta y Tres

## FECHAS ESPERADAS DE EVENTOS FENOLÓGICOS

### Metodología

Se usa la acumulación de temperatura por encima de 10°C, considerando la temperatura media (promedio de la T. Máxima y T. Mínima) con los siguientes límites:

Si T. Máxima > 34°C se considera 34°C como temperatura Máxima de ese día.

Si T. Mínima > 21°C se considera 21°C como temperatura Mínima de ese día.

Para la media se consideró el promedio de temperatura media por día (promedio de 1973/74-2020/21) y la acumulación térmica del cuadro 7 para cada variedad.

Para la zafra 2021/22 se considera los datos del cuadro 7 y la temperatura media de esta zafra por encima de 10°C con las restricciones establecidas.

CUADRO 1 - EL PASO 144

| Fecha de emergencia | Inicio macollaje |            |         | Primordio floral |            |         | 50% floración |            |         | Madurez fisiológica |            |         |
|---------------------|------------------|------------|---------|------------------|------------|---------|---------------|------------|---------|---------------------|------------|---------|
|                     | Media            | Días (+/-) | 2021/22 | Media            | Días (+/-) | 2021/22 | Media         | Días (+/-) | 2021/22 | Media               | Días (+/-) | 2021/22 |
| 01-Oct              | 28-Oct           | 0          | 28-Oct  | 25-Dic           | -6         | 19-Dic  | 25-Ene        | -6         | 19-Ene  | 02-Mar              | -6         | 24-Feb  |
| 10-Oct              | 04-Nov           | -4         | 31-Oct  | 29-Dic           | -6         | 23-Dic  | 29-Ene        | -7         | 22-Ene  | 06-Mar              | -8         | 26-Feb  |
| 20-Oct              | 12-Nov           | -6         | 06-Nov  | 03-Ene           | -6         | 28-Dic  | 03-Feb        | -7         | 27-Ene  | 12-Mar              | -8         | 04-Mar  |
| 30-Oct              | 20-Nov           | -3         | 17-Nov  | 08-Ene           | -5         | 08-Ene  | 09-Feb        | -7         | 02-Feb  | 19-Mar              | -8         | 11-Mar  |
| 10-Nov              | 29-Nov           | -2         | 27-Nov  | 15-Ene           | -4         | 11-Ene  | 16-Feb        | -4         | 12-Feb  | 27-Mar              | -5         | 22-Mar  |
| 20-Nov              | 07-Dic           | -1         | 06-Dic  | 22-Ene           | -4         | 18-Ene  | 22-Feb        | -3         | 19-Feb  | 05-Abr              | -4         | 01-Abr  |
| 30-Nov              | 16-Dic           | 0          | 16-Dic  | 29-Ene           | -2         | 27-Ene  | 02-Mar        | -2         | 28-Feb  | 18-Abr              | -4         | 14-Abr  |

CUADRO 2 - INIA TACUARÍ

| Fecha de emergencia | Inicio macollaje |            |         | Primordio floral |            |         | 50% floración |            |         | Madurez fisiológica |            |         |
|---------------------|------------------|------------|---------|------------------|------------|---------|---------------|------------|---------|---------------------|------------|---------|
|                     | Media            | Días (+/-) | 2021/22 | Media            | Días (+/-) | 2021/22 | Media         | Días (+/-) | 2021/22 | Media               | Días (+/-) | 2021/22 |
| 01-Oct              | 01-Nov           | -1         | 31-Oct  | 19-Dic           | -5         | 14-Dic  | 12-Ene        | -7         | 05-Ene  | 21-Feb              | -6         | 15-Feb  |
| 10-Oct              | 08-Nov           | -4         | 04-Nov  | 23-Dic           | -6         | 17-Dic  | 16-Ene        | -8         | 08-Ene  | 25-Feb              | -7         | 18-Feb  |
| 20-Oct              | 15-Nov           | -5         | 10-Nov  | 28-Dic           | -6         | 22-Dic  | 21-Ene        | -8         | 13-Ene  | 03-Mar              | -8         | 23-Feb  |
| 30-Oct              | 23-Nov           | -4         | 19-Nov  | 03-Ene           | -5         | 29-Dic  | 27-Ene        | -7         | 20-Ene  | 09-Mar              | -7         | 02-Mar  |
| 10-Nov              | 02-Dic           | -2         | 30-Nov  | 10-Ene           | -3         | 07-Ene  | 02-Feb        | -4         | 29-Ene  | 16-Mar              | -4         | 12-Mar  |
| 20-Nov              | 10-Dic           | -2         | 08-Dic  | 17-Ene           | -6         | 11-Ene  | 09-Feb        | -4         | 05-Feb  | 25-Mar              | -5         | 20-Mar  |
| 30-Nov              | 19-Dic           | 0          | 19-Dic  | 24-Ene           | -2         | 22-Ene  | 17-Feb        | -2         | 15-Feb  | 04-Abr              | -3         | 01-Abr  |

CUADRO 3 - INIA OLIMAR

| Fecha de emergencia | Inicio macollaje |            |         | Primordio floral |            |         | 50% floración |            |         | Madurez fisiológica |            |         |
|---------------------|------------------|------------|---------|------------------|------------|---------|---------------|------------|---------|---------------------|------------|---------|
|                     | Media            | Días (+/-) | 2021/22 | Media            | Días (+/-) | 2021/22 | Media         | Días (+/-) | 2021/22 | Media               | Días (+/-) | 2021/22 |
| 01-Oct              | 27-Oct           | 1          | 28-Oct  | 17-Dic           | -5         | 12-Dic  | 14-Ene        | -6         | 08-Ene  | 21-Feb              | -7         | 14-Feb  |
| 10-Oct              | 03-Nov           | -4         | 30-Oct  | 21-Dic           | -6         | 15-Dic  | 18-Ene        | -7         | 11-Ene  | 25-Feb              | -8         | 17-Feb  |
| 20-Oct              | 11-Nov           | -6         | 05-Nov  | 26-Dic           | -6         | 20-Dic  | 23-Ene        | -7         | 16-Ene  | 02-Mar              | -8         | 22-Feb  |
| 30-Oct              | 19-Nov           | -3         | 16-Nov  | 01-Ene           | -5         | 27-Dic  | 29-Ene        | -6         | 23-Ene  | 08-Mar              | -7         | 01-Mar  |
| 10-Nov              | 28-Nov           | 0          | 28-Nov  | 08-Ene           | -2         | 06-Ene  | 05-Feb        | -4         | 01-Feb  | 15-Mar              | -4         | 11-Mar  |
| 20-Nov              | 07-Dic           | -2         | 05-Dic  | 15-Ene           | -3         | 12-Ene  | 12-Feb        | -4         | 08-Feb  | 24-Mar              | -5         | 19-Mar  |
| 30-Nov              | 15-Dic           | 1          | 16-Dic  | 22-Ene           | -2         | 20-Ene  | 19-Feb        | -2         | 17-Feb  | 03-Abr              | -3         | 31-Mar  |

CUADRO 4 - INIA Merín

| Fecha de emergencia | Inicio macollaje |            |         | Primordio floral |            |         | 50% floración |            |         | Madurez fisiológica |            |         |
|---------------------|------------------|------------|---------|------------------|------------|---------|---------------|------------|---------|---------------------|------------|---------|
|                     | Media            | Días (+/-) | 2021/22 | Media            | Días (+/-) | 2021/22 | Media         | Días (+/-) | 2021/22 | Media               | Días (+/-) | 2021/22 |
| 01-Oct              | 25-Oct           | 2          | 27-Oct  | 16-Dic           | -5         | 11-Dic  | 31-Ene        | -6         | 25-Ene  | 18-Mar              | -8         | 10-Mar  |
| 10-Oct              | 01-Nov           | -3         | 29-Oct  | 20-Dic           | -5         | 15-Dic  | 04-Feb        | -8         | 27-Ene  | 22-Mar              | -9         | 13-Mar  |
| 20-Oct              | 09-Nov           | -3         | 06-Nov  | 26-Dic           | -6         | 20-Dic  | 09-Feb        | -8         | 01-Feb  | 29-Mar              | -10        | 19-Mar  |
| 30-Oct              | 18-Nov           | -4         | 14-Nov  | 01-Ene           | -5         | 27-Dic  | 15-Feb        | -7         | 08-Feb  | 06-Abr              | -9         | 28-Mar  |
| 10-Nov              | 27-Nov           | -1         | 26-Nov  | 07-Ene           | -3         | 04-Ene  | 22-Feb        | -4         | 18-Feb  | 17-Abr              | -6         | 11-Abr  |
| 20-Nov              | 05-Dic           | -2         | 03-Dic  | 14-Ene           | -4         | 10-Ene  | 01-Mar        | -4         | 25-Feb  | 30-Abr              | -7         | 23-Abr  |
| 30-Nov              | 14-Dic           | 0          | 14-Dic  | 21-Ene           | -2         | 19-Ene  | 09-Mar        | -3         | 06-Mar  | 21-May              | -7         | 14-May  |

CUADRO 5 - 9197\*

| Fecha de emergencia | Inicio macollaje |            |         | Primordio floral |            |         | 50% floración |            |         | Madurez fisiológica |            |         |
|---------------------|------------------|------------|---------|------------------|------------|---------|---------------|------------|---------|---------------------|------------|---------|
|                     | Media            | Días (+/-) | 2021/22 | Media            | Días (+/-) | 2021/22 | Media         | Días (+/-) | 2021/22 | Media               | Días (+/-) | 2021/22 |
| 01-Oct              | 25-Oct           | 1          | 26-Oct  | 20-Dic           | -4         | 16-Dic  | 02-Feb        | -7         | 26-Ene  | 16-Mar              | -7         | 09-Mar  |
| 10-Oct              | 01-Nov           | -3         | 29-Oct  | 25-Dic           | -7         | 18-Dic  | 06-Feb        | -8         | 29-Ene  | 21-Mar              | -9         | 12-Mar  |
| 20-Oct              | 09-Nov           | -3         | 06-Nov  | 30-Dic           | -6         | 24-Dic  | 11-Feb        | -8         | 03-Feb  | 27-Mar              | -9         | 18-Mar  |
| 30-Oct              | 17-Nov           | -3         | 14-Nov  | 05-Ene           | -5         | 31-Dic  | 17-Feb        | -7         | 10-Feb  | 05-Abr              | -9         | 27-Mar  |
| 10-Nov              | 26-Nov           | 0          | 26-Nov  | 11-Ene           | -3         | 08-Ene  | 23-Feb        | -3         | 20-Feb  | 15-Abr              | -6         | 09-Abr  |
| 20-Nov              | 05-Dic           | -2         | 03-Dic  | 18-Ene           | -4         | 14-Ene  | 02-Mar        | -3         | 27-Feb  | 28-Abr              | -7         | 21-Abr  |
| 30-Nov              | 14-Dic           | 0          | 14-Dic  | 25-Ene           | -2         | 23-Ene  | 10-Mar        | -2         | 08-Mar  | 18-May              | -7         | 11-May  |

CUADRO 6 - 9193\*

| Fecha de emergencia | Inicio macollaje |            |         | Primordio floral |            |         | 50% floración |            |         | Madurez fisiológica |            |         |
|---------------------|------------------|------------|---------|------------------|------------|---------|---------------|------------|---------|---------------------|------------|---------|
|                     | Media            | Días (+/-) | 2021/22 | Media            | Días (+/-) | 2021/22 | Media         | Días (+/-) | 2021/22 | Media               | Días (+/-) | 2021/22 |
| 01-Oct              | 24-Oct           | 2          | 26-Oct  | 09-Dic           | -5         | 04-Dic  | 26-Ene        | -6         | 20-Ene  | 10-Mar              | -6         | 04-Mar  |
| 10-Oct              | 30-Oct           | -2         | 28-Oct  | 13-Dic           | -6         | 07-Dic  | 30-Ene        | -7         | 23-Ene  | 15-Mar              | -9         | 06-Mar  |
| 20-Oct              | 07-Nov           | -3         | 04-Nov  | 19-Dic           | -6         | 13-Dic  | 04-Feb        | -7         | 28-Ene  | 21-Mar              | -9         | 12-Mar  |
| 30-Oct              | 16-Nov           | -3         | 13-Nov  | 25-Dic           | -5         | 20-Dic  | 10-Feb        | -7         | 03-Feb  | 28-Mar              | -8         | 20-Mar  |
| 10-Nov              | 25-Nov           | 0          | 25-Nov  | 01-Ene           | -2         | 30-Dic  | 17-Feb        | -4         | 13-Feb  | 07-Abr              | -6         | 01-Abr  |
| 20-Nov              | 04-Dic           | -2         | 02-Dic  | 08-Ene           | -3         | 05-Ene  | 23-Feb        | -3         | 20-Feb  | 18-Abr              | -6         | 12-Abr  |
| 30-Nov              | 13-Dic           | 0          | 13-Dic  | 15-Ene           | -2         | 13-Ene  | 03-Mar        | -2         | 01-Mar  | 03-May              | -5         | 28-Abr  |

CUADRO 7 - REQUERIMIENTOS TÉRMICOS PARA 6 VARIETADES (SUMA TÉRMICA EN GRADOS DÍAS)

|                        | EP 144   |              | INIA Tacuarí |              | INIA Olimar |              | INIA Merín |          | 9197 *   |          | 9193 *   |  |
|------------------------|----------|--------------|--------------|--------------|-------------|--------------|------------|----------|----------|----------|----------|--|
|                        | Ac. Tér. | DE G.D.(+/-) | Ac. Tér.     | DE G.D.(+/-) | Ac. Tér.    | DE G.D.(+/-) | Ac. Tér.   | Ac. Tér. | Ac. Tér. | Ac. Tér. | Ac. Tér. |  |
| Em.-In. Mac.           | 183      | 30           | 214          | 40           | 174         | 29           | 160        | 158      | 147      |          |          |  |
| Em.-Prim.              | 743      | 59           | 674          | 73           | 650         | 37           | 640        | 693      | 560      |          |          |  |
| Em.-50% Flor.          | 1147     | 65           | 978          | 68           | 1011        | 46           | 1225       | 1246     | 1160     |          |          |  |
| 50% Flor.-Mad. Fisiol. | 437      | 70           | 492          | 59           | 468         | 37           | 562        | 525      | 543      |          |          |  |
| Em.-Mad.               | 1607     | 98           | 1495         | 82           | 1486        | 78           | 1785       | 1771     | 1703     |          |          |  |

Em.-Prim.= Emergencia - Primordio floral

50% Flor.-Mad. Fisiol.= 50% Floración - Madurez fisiológica

Em.-Mad.= Emergencia - Madurez Fisiológica

\* datos correspondientes a 1 año de evaluación.

Em.-In. Mac.= Emergencia - Iniciación del macollaje

Em.-50% Flor.= Emergencia - 50% Floración

Ac. Tér. = Acumulación térmica en grados días

Días (+/-) = diferencia entre lo previsto y la presente zafra

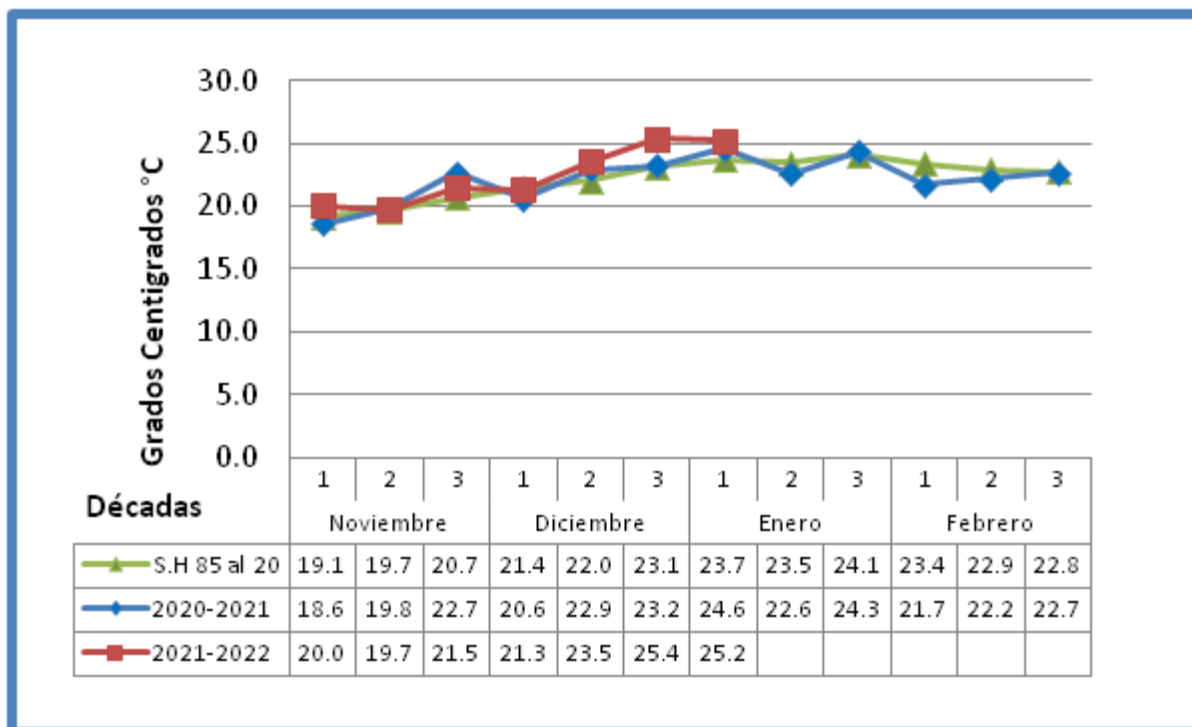
Media = Fecha esperada calculada con la suma térmica

para cada período y la temperatura media diaria histórica

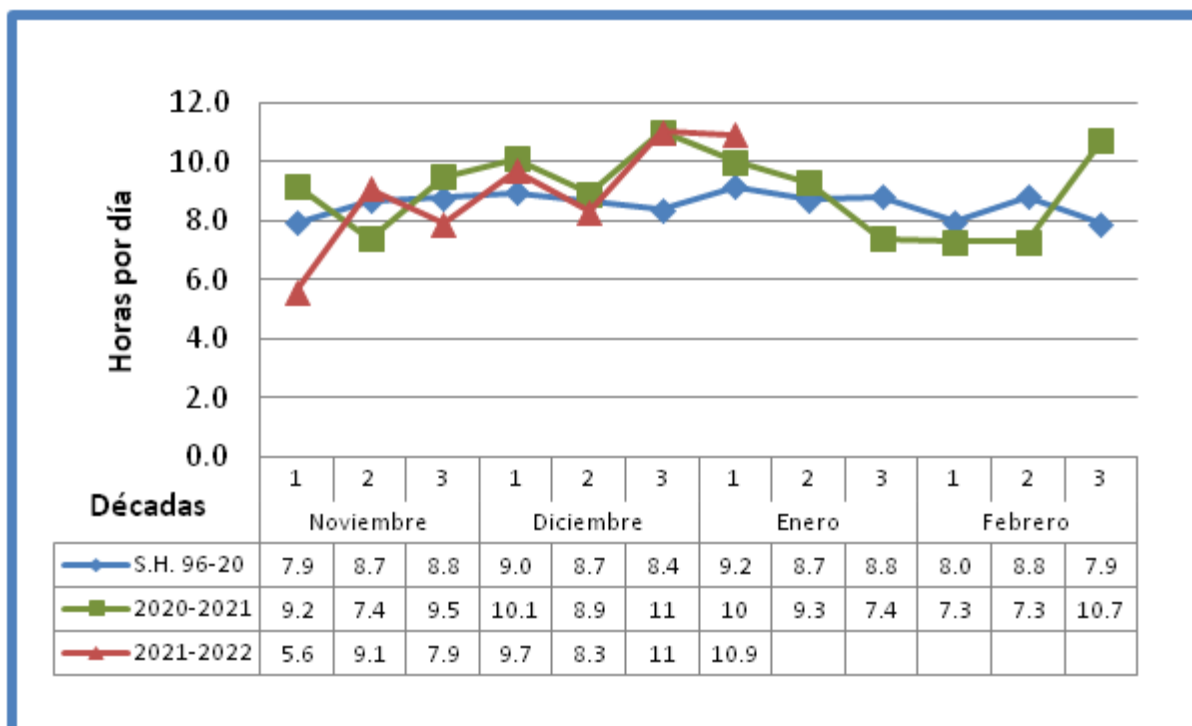
DE G.D.(+/-)= mas-menos 1 desvío estándar en grados días

[VOLVER](#)

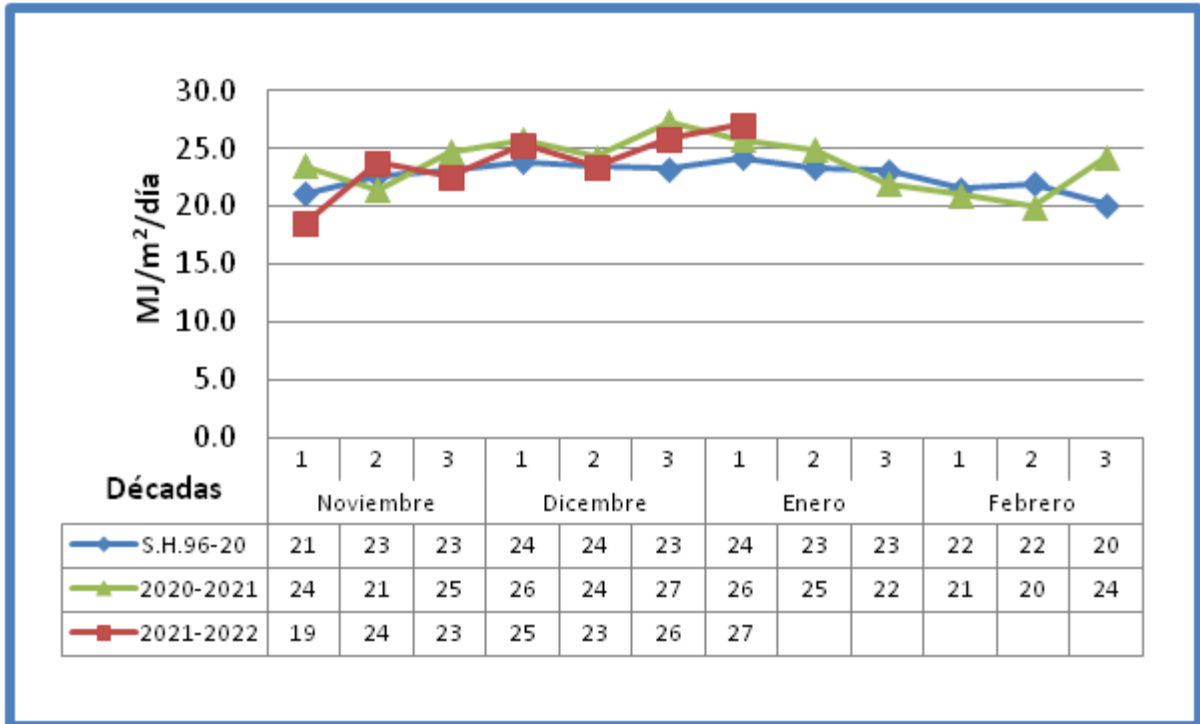
**TEMPERATURA MEDIA (Promedio cada 10 días) (\*)**



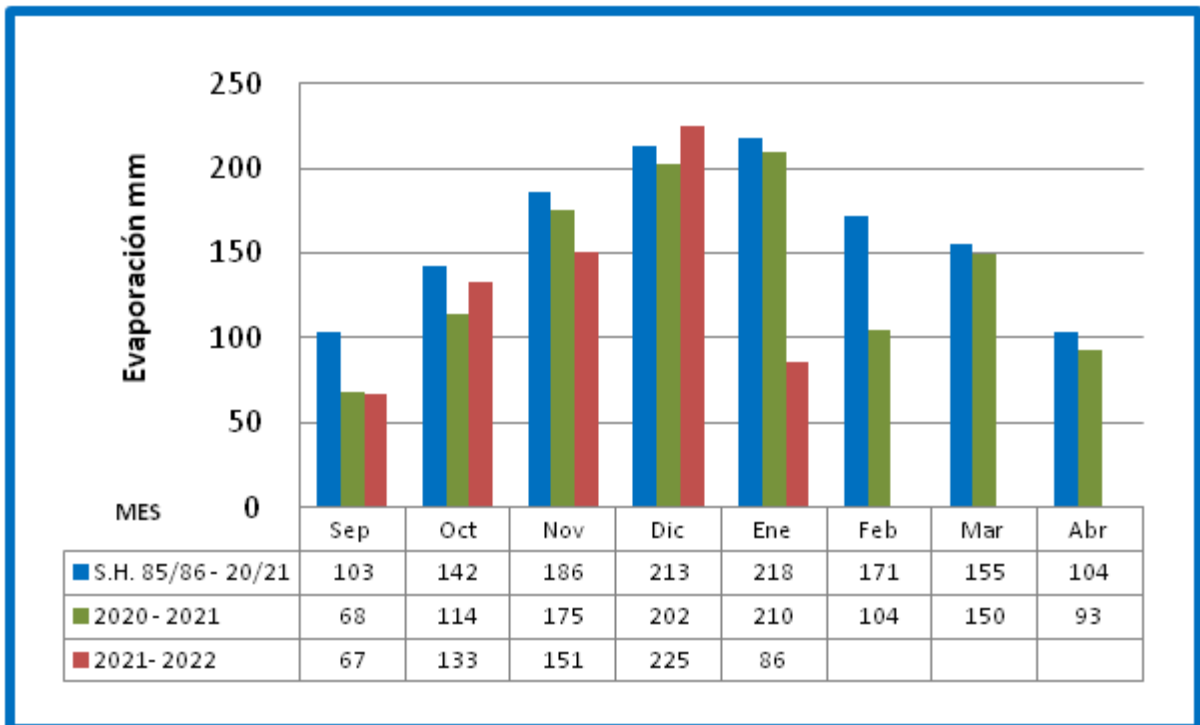
**HORAS DE SOL (Promedio cada 10 días) (\*)**



**RADIACIÓN SOLAR (Promedio cada 10 días) (\*)**

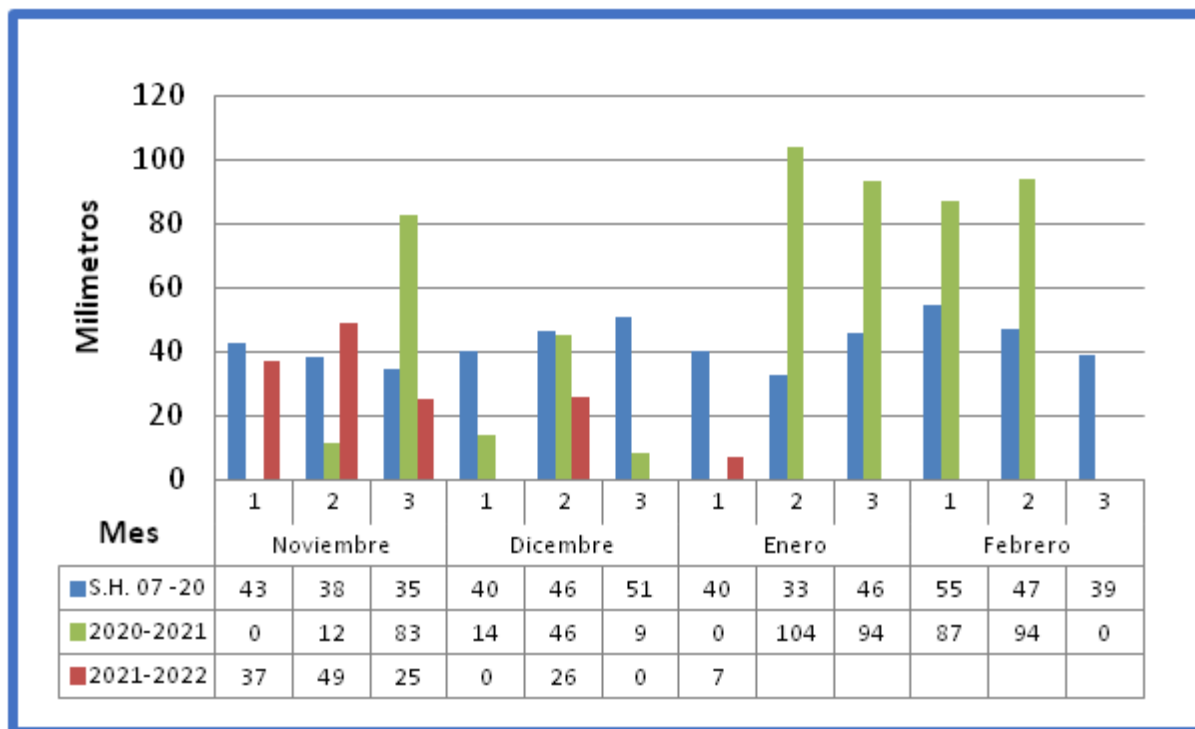


**EVAPORACIÓN TANQUE "A" (Acumulada mensual) (\*)**





**PRECIPITACIONES (Acumuladas decádicas) (\*)**



Unidad Experimental La Magnolia - Tacuarembó

| Número de días con temperatura mínima igual o inferior a 15C° |          |          |          |          |          |          |          |          |          |          |          |          |
|---|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Día   | Enero    |          |          |          | Febrero  |          |          |          | Marzo    |          |          |          |
|   | 2019     | 2020     | 2021     | 2022     | 2019     | 2020     | 2021     | 2022     | 2019     | 2020     | 2021     | 2021     |
| 1   |          |          | 10.9     |          |          |          |          |          | 8.0      | 15       |          |          |
| 2   |          |          | 14.1     |          |          |          |          |          | 14.0     |          |          |          |
| 3   | 15       |          | 14.9     |          |          |          |          |          |          |          |          |          |
| 4   | 13.9     |          |          |          | 12.0     |          |          |          |          |          |          |          |
| 5   |          |          |          |          | 12.0     |          | 14.6     |          |          | 15       |          |          |
| 6   |          |          |          | 13.3     |          |          | 12.4     |          |          | 15       | 12.1     |          |
| 7   |          | 14.4     |          |          |          |          | 14.9     |          |          |          | 12.9     |          |
| 8   |          | 13.6     |          |          |          |          |          |          |          |          | 12.5     |          |
| 9   |          |          |          |          |          |          |          |          | 14.1     |          | 14.5     |          |
| 10  |          |          |          |          |          | 10.1     |          |          |          |          | 14.1     |          |
| <b>N° días</b>  | <b>2</b> | <b>2</b> | <b>3</b> | <b>1</b> | <b>2</b> | <b>1</b> | <b>3</b> | <b>0</b> | <b>3</b> | <b>3</b> | <b>5</b> | <b>0</b> |
| 11  |          |          |          |          |          |          |          |          |          |          | 14.8     |          |
| 12  |          |          |          |          | 15       |          |          |          |          |          | 13.5     |          |
| 13  |          | 14       | 10.9     |          | 13.9     |          |          |          |          |          |          |          |
| 14  |          | 11       | 9.6      |          |          |          |          |          |          |          |          |          |
| 15  |          | 13.9     |          |          |          |          |          |          | 15       |          | 15       |          |
| 16  |          |          |          |          |          |          |          |          |          |          |          |          |
| 17  |          |          |          |          |          |          |          |          |          | 15       |          |          |
| 18  |          |          | 13.3     |          |          |          |          |          |          |          | 14.1     |          |
| 19  |          |          | 14       |          |          | 14.2     |          |          |          |          | 14.7     |          |
| 20  | 15       |          | 13.0     |          |          | 13.0     |          |          | 14.0     | 13.8     |          |          |
| <b>N° días</b>  | <b>1</b> | <b>3</b> | <b>5</b> | <b>0</b> | <b>2</b> | <b>2</b> | <b>0</b> | <b>0</b> | <b>2</b> | <b>2</b> | <b>5</b> | <b>0</b> |
| 21  |          |          | 13       |          |          | 11.2     | 14.1     |          | 7.8      | 10.3     |          |          |
| 22  |          |          |          |          |          | 9.6      |          |          | 8        | 13.7     |          |          |
| 23  |          |          |          |          |          | 9.3      |          |          | 10       | 13.1     |          |          |
| 24  |          |          |          |          |          | 14       | 13.6     |          |          |          |          |          |
| 25  |          |          |          |          |          |          | 11.8     |          | 13.6     |          |          |          |
| 26  |          |          |          |          | 14.9     | 11.9     | 14.4     |          | 14.9     |          |          |          |
| 27  |          |          |          |          | 10.2     | 11.7     |          |          |          |          |          |          |
| 28  |          | 14.0     |          |          | 13       | 14.9     |          |          | 13.3     |          | 14.6     |          |
| 29  |          |          |          |          |          |          |          |          |          |          | 13.8     |          |
| 30  |          |          |          |          |          |          |          |          |          |          |          |          |
| 31  |          |          |          |          |          |          |          |          |          |          | 10.3     |          |
| <b>N° días</b>  | <b>0</b> | <b>1</b> | <b>1</b> | <b>0</b> | <b>3</b> | <b>7</b> | <b>4</b> | <b>0</b> | <b>6</b> | <b>3</b> | <b>3</b> | <b>0</b> |

# Unidad Experimental La Magnolia - Tacuarembó

## FECHAS ESPERADAS DE EVENTOS FENOLÓGICOS

### Metodología

Se usa la acumulación de temperatura por encima de 10°C, considerando la temperatura media (promedio de la T. Máxima y T. Mínima) con los siguientes límites:

Si T. Máxima > 34°C se considera 34°C como temperatura Máxima de ese día.

Si T. Mínima > 21°C se considera 21°C como temperatura Mínima de ese día.

Para la media se consideró el promedio de temperatura media por día (promedio de 1973/74-2020/21) y la acumulación térmica del cuadro 7 para cada variedad.

Para la zafra 2021/22 se considera los datos del cuadro 7 y la temperatura media de esta zafra por encima de 10°C con las restricciones establecidas.

CUADRO 1 - EL PASO 144

| Fecha de emergencia | Inicio macollaje |            |         | Primordio floral |            |         | 50% floración |            |         | Madurez fisiológica |            |         |
|---------------------|------------------|------------|---------|------------------|------------|---------|---------------|------------|---------|---------------------|------------|---------|
|                     | Media            | Días (+/-) | 2021/22 | Media            | Días (+/-) | 2021/22 | Media         | Días (+/-) | 2021/22 | Media               | Días (+/-) | 2021/22 |
| 01-Oct              | 26-Oct           | 1          | 27-oct. | 20-Dic           | -2         | 18-Dic  | 19-Ene        | -5         | 14-Ene  | 23-Feb              | -5         | 18-Feb  |
| 10-Oct              | 02-Nov           | -3         | 30-oct. | 24-Dic           | -3         | 21-Dic  | 23-Ene        | -6         | 17-Ene  | 28-Feb              | -7         | 21-Feb  |
| 20-Oct              | 10-Nov           | -3         | 7-nov.  | 30-Dic           | -5         | 25-Dic  | 29-Ene        | -7         | 22-Ene  | 06-Mar              | -8         | 26-Feb  |
| 30-Oct              | 19-Nov           | -3         | 16-nov. | 05-Ene           | -4         | 01-Ene  | 04-Feb        | -6         | 29-Ene  | 12-Mar              | -6         | 06-Mar  |
| 10-Nov              | 27-Nov           | 0          | 27-Nov. | 12-Ene           | -3         | 09-Ene  | 11-Feb        | -4         | 07-Feb  | 21-Mar              | -5         | 16-Mar  |
| 20-Nov              | 06-Dic           | 0          | 06-Dic  | 19-Ene           | -4         | 15-Ene  | 18-Feb        | -4         | 14-Feb  | 30-Mar              | -5         | 25-Mar  |
| 30-Nov              | 15-Dic           | 0          | 15-Dic  | 27-Ene           | -4         | 23-Ene  | 27-Feb        | -4         | 23-Feb  | 10-Abr              | -5         | 05-Abr  |

CUADRO 2 - INIA TACUARÍ

| Fecha de emergencia | Inicio macollaje |            |         | Primordio floral |            |         | 50% floración |            |         | Madurez fisiológica |            |         |
|---------------------|------------------|------------|---------|------------------|------------|---------|---------------|------------|---------|---------------------|------------|---------|
|                     | Media            | Días (+/-) | 2021/22 | Media            | Días (+/-) | 2021/22 | Media         | Días (+/-) | 2021/22 | Media               | Días (+/-) | 2021/22 |
| 01-Oct              | 30-Oct           | 0          | 30-Oct  | 14-Dic           | -2         | 12-Dic  | 07-Ene        | -4         | 03-Ene  | 14-Feb              | -5         | 09-Feb  |
| 10-Oct              | 05-Nov           | -2         | 03-Nov  | 19-Dic           | -4         | 15-Dic  | 11-Ene        | -5         | 06-Ene  | 19-Feb              | -7         | 12-Feb  |
| 20-Oct              | 13-Nov           | -3         | 10-Nov  | 25-Dic           | -4         | 21-Dic  | 16-Ene        | -5         | 11-Ene  | 24-Feb              | -7         | 17-Feb  |
| 30-Oct              | 22-Nov           | -3         | 19-Nov  | 31-Dic           | -4         | 27-Dic  | 22-Ene        | -5         | 17-Ene  | 02-Mar              | -5         | 25-Feb  |
| 10-Nov              | 30-Nov           | 0          | 30-Nov  | 07-Ene           | -3         | 04-Ene  | 29-Ene        | -4         | 25-Ene  | 10-Mar              | -3         | 07-Mar  |
| 20-Nov              | 09-Dic           | 0          | 09-Dic  | 14-Ene           | -3         | 11-Ene  | 05-Feb        | -4         | 01-Feb  | 18-Mar              | -4         | 14-Mar  |
| 30-Nov              | 18-Dic           | 0          | 18-Dic  | 22-Ene           | -4         | 18-Ene  | 13-Feb        | -3         | 10-Feb  | 28-Mar              | -3         | 25-Mar  |

CUADRO 3 - INIA OLIMAR

| Fecha de emergencia | Inicio macollaje |            |         | Primordio floral |            |         | 50% floración |            |         | Madurez fisiológica |            |         |
|---------------------|------------------|------------|---------|------------------|------------|---------|---------------|------------|---------|---------------------|------------|---------|
|                     | Media            | Días (+/-) | 2021/22 | Media            | Días (+/-) | 2021/22 | Media         | Días (+/-) | 2021/22 | Media               | Días (+/-) | 2021/22 |
| 01-Oct              | 25-Oct           | 2          | 27-Oct  | 12-Dic           | -2         | 10-Dic  | 09-Ene        | -4         | 05-Ene  | 14-Feb              | -6         | 08-Feb  |
| 10-Oct              | 31-Oct           | -1         | 30-Oct  | 17-Dic           | -4         | 13-Dic  | 13-Ene        | -5         | 08-Ene  | 18-Feb              | -7         | 11-Feb  |
| 20-Oct              | 09-Nov           | -3         | 06-Nov  | 23-Dic           | -4         | 19-Dic  | 19-Ene        | -7         | 12-Ene  | 24-Feb              | -7         | 17-Feb  |
| 30-Oct              | 18-Nov           | -3         | 15-Nov  | 29-Dic           | -4         | 25-Dic  | 25-Ene        | -6         | 19-Ene  | 02-Mar              | -6         | 24-Feb  |
| 10-Nov              | 27-Nov           | 0          | 27-Nov  | 05-Ene           | -2         | 03-Ene  | 01-Feb        | -4         | 28-Ene  | 10-Mar              | -4         | 06-Mar  |
| 20-Nov              | 05-Dic           | 0          | 05-Dic  | 12-Ene           | -3         | 09-Ene  | 08-Feb        | -4         | 04-Feb  | 18-Mar              | -4         | 14-Mar  |
| 30-Nov              | 15-Dic           | -1         | 14-Dic  | 20-Ene           | -3         | 17-Ene  | 16-Feb        | -4         | 12-Feb  | 28-Mar              | -4         | 24-Mar  |

CUADRO 4 - INIA Merín

| Fecha de emergencia | Inicio macollaje |            |         | Primordio floral |            |         | 50% floración |            |         | Madurez fisiológica |            |         |
|---------------------|------------------|------------|---------|------------------|------------|---------|---------------|------------|---------|---------------------|------------|---------|
|                     | Media            | Días (+/-) | 2021/22 | Media            | Días (+/-) | 2021/22 | Media         | Días (+/-) | 2021/22 | Media               | Días (+/-) | 2021/22 |
| 01-Oct              | 23-Oct           | 2          | 25-Oct  | 11-Dic           | -2         | 09-Dic  | 25-Ene        | -5         | 20-Ene  | 10-Mar              | -6         | 04-Mar  |
| 10-Oct              | 30-Oct           | -2         | 28-Oct  | 16-Dic           | -4         | 12-Dic  | 29-Ene        | -6         | 23-Ene  | 14-Mar              | -7         | 07-Mar  |
| 20-Oct              | 07-Nov           | -2         | 05-Nov  | 22-Dic           | -4         | 18-Dic  | 03-Feb        | -6         | 28-Ene  | 21-Mar              | -8         | 13-Mar  |
| 30-Oct              | 16-Nov           | -3         | 13-Nov  | 28-Dic           | -4         | 24-Dic  | 09-Feb        | -5         | 04-Feb  | 29-Mar              | -8         | 21-Mar  |
| 10-Nov              | 25-Nov           | 0          | 25-Nov  | 04-Ene           | -2         | 02-Ene  | 17-Feb        | -4         | 13-Feb  | 08-Abr              | -6         | 02-Abr  |
| 20-Nov              | 04-Dic           | 0          | 04-Dic  | 11-Ene           | -2         | 09-Ene  | 24-Feb        | -4         | 20-Feb  | 19-Abr              | -7         | 12-Abr  |
| 30-Nov              | 13-Dic           | 0          | 13-Dic  | 19-Ene           | -3         | 16-Ene  | 05-Mar        | -3         | 02-Mar  | 01-May              | -3         | 28-Abr  |

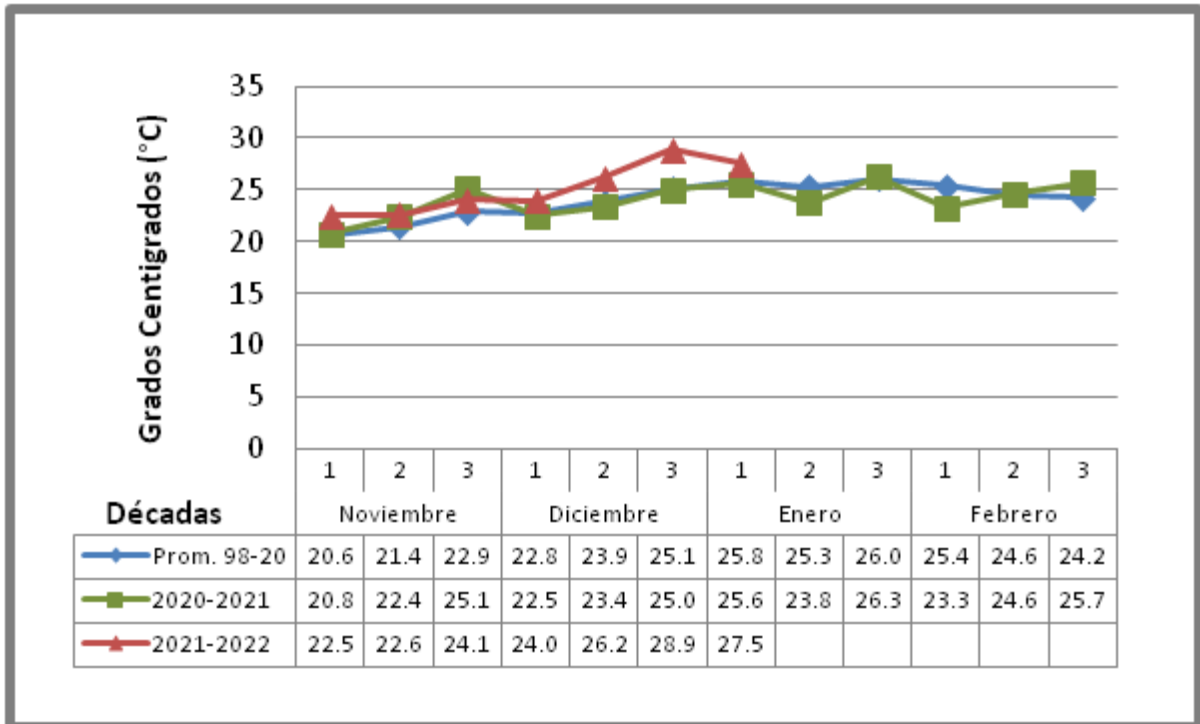
CUADRO 5 - 9197\*

| Fecha de emergencia | Inicio macollaje |            |         | Primordio floral |            |         | 50% floración |            |         | Madurez fisiológica |            |         |
|---------------------|------------------|------------|---------|------------------|------------|---------|---------------|------------|---------|---------------------|------------|---------|
|                     | Media            | Días (+/-) | 2021/22 | Media            | Días (+/-) | 2021/22 | Media         | Días (+/-) | 2021/22 | Media               | Días (+/-) | 2021/22 |
| 01-Oct              | 23-Oct           | 2          | 25-Oct  | 16-Dic           | -3         | 13-Dic  | 26-Ene        | -5         | 21-Ene  | 08-Mar              | -5         | 03-Mar  |
| 10-Oct              | 29-Oct           | -1         | 28-Oct  | 20-Dic           | -3         | 17-Dic  | 30-Ene        | -6         | 24-Ene  | 13-Mar              | -7         | 06-Mar  |
| 20-Oct              | 07-Nov           | -3         | 04-Nov  | 26-Dic           | -4         | 22-Dic  | 05-Feb        | -7         | 29-Ene  | 19-Mar              | -7         | 12-Mar  |
| 30-Oct              | 16-Nov           | -3         | 13-Nov  | 01-Ene           | -4         | 28-Dic  | 11-Feb        | -6         | 05-Feb  | 27-Mar              | -7         | 20-Mar  |
| 10-Nov              | 25-Nov           | 0          | 25-Nov  | 08-Ene           | -2         | 06-Ene  | 19-Feb        | -4         | 15-Feb  | 06-Abr              | -5         | 01-Abr  |
| 20-Nov              | 04-Dic           | 0          | 04-Dic  | 15-Ene           | -3         | 12-Ene  | 26-Feb        | -4         | 22-Feb  | 17-Abr              | -6         | 11-Abr  |
| 30-Nov              | 13-Dic           | 0          | 13-Dic  | 23-Ene           | -3         | 20-Ene  | 07-Mar        | -4         | 03-Mar  | 01-May              | -5         | 26-Abr  |

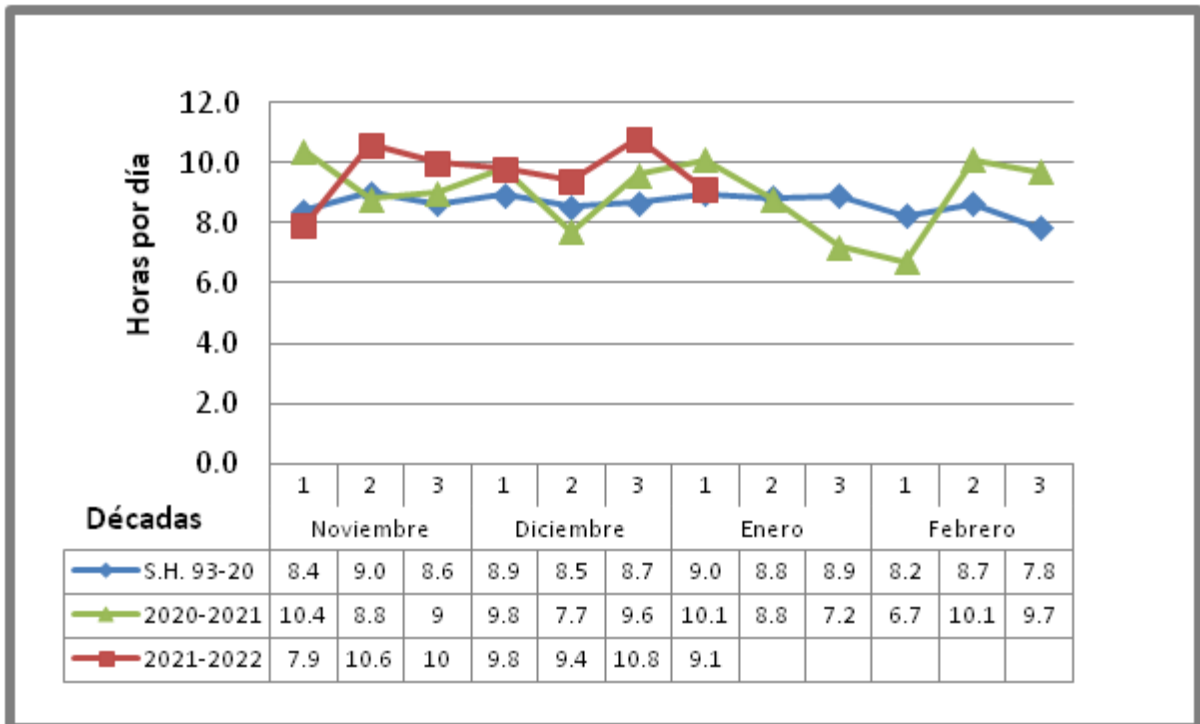
CUADRO 6 - 9193\*

[VOLVER](#)

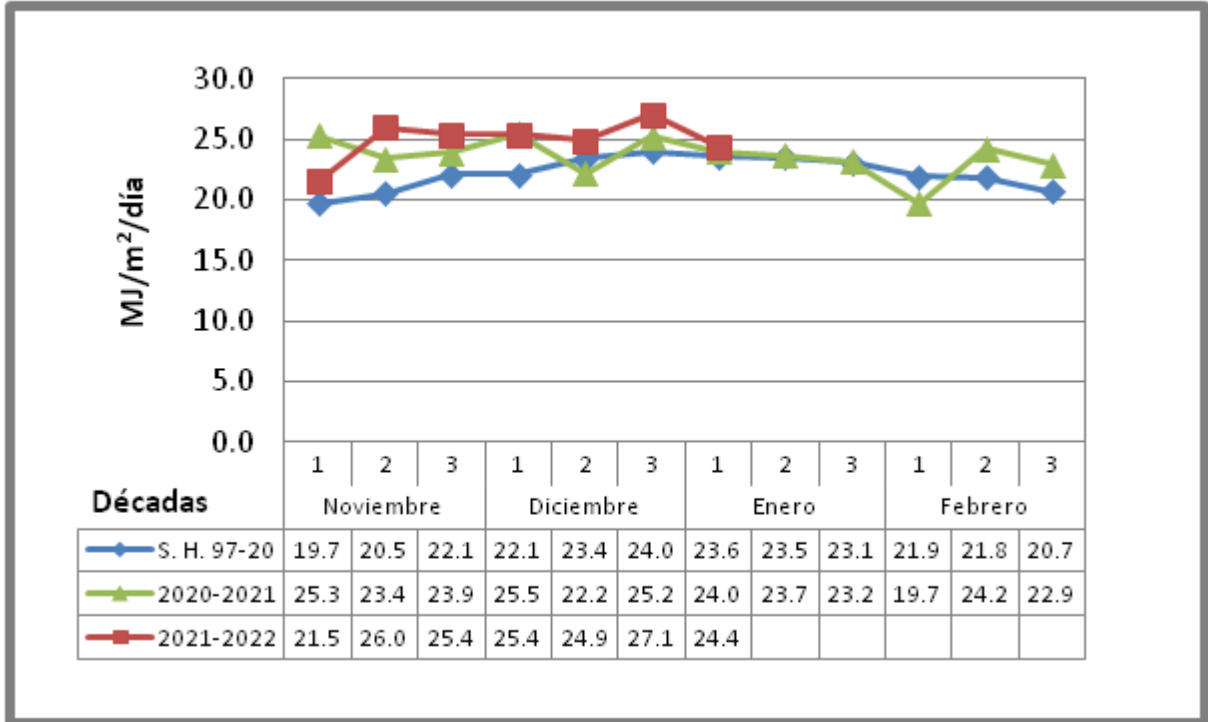
**TEMPERATURA MEDIA (Promedio cada 10 días) (\*)**



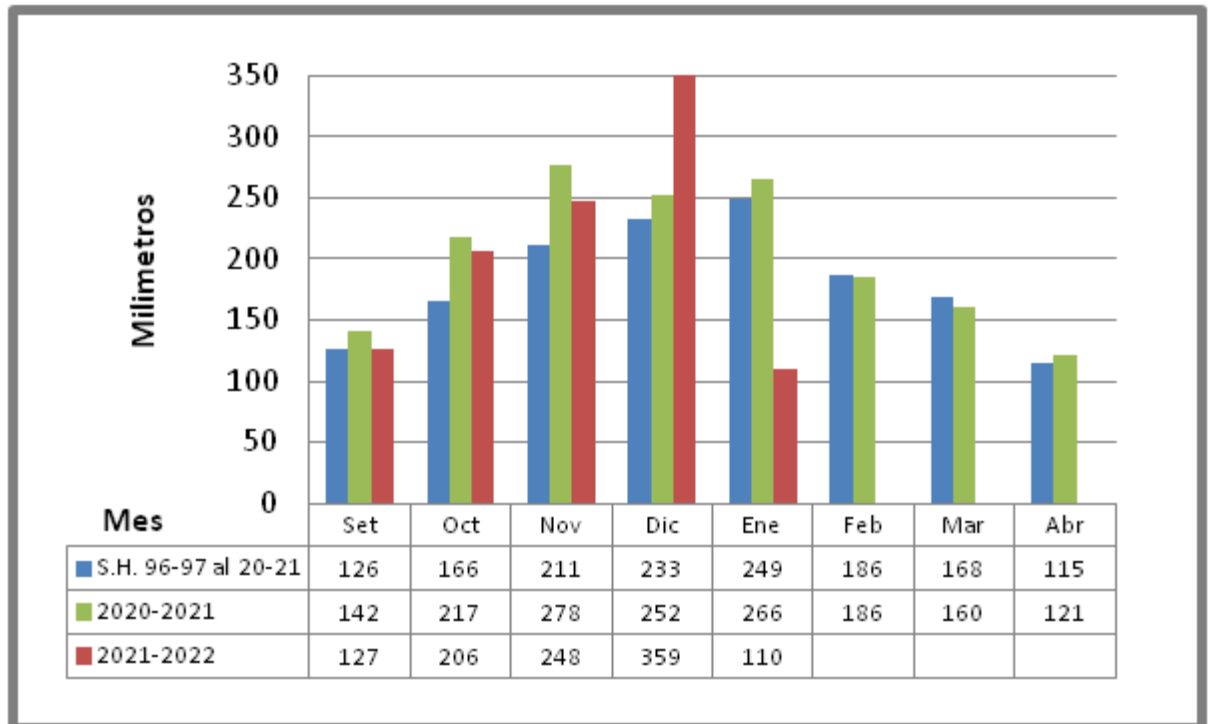
**HORAS DE SOL (Promedio cada 10 días) (\*)**



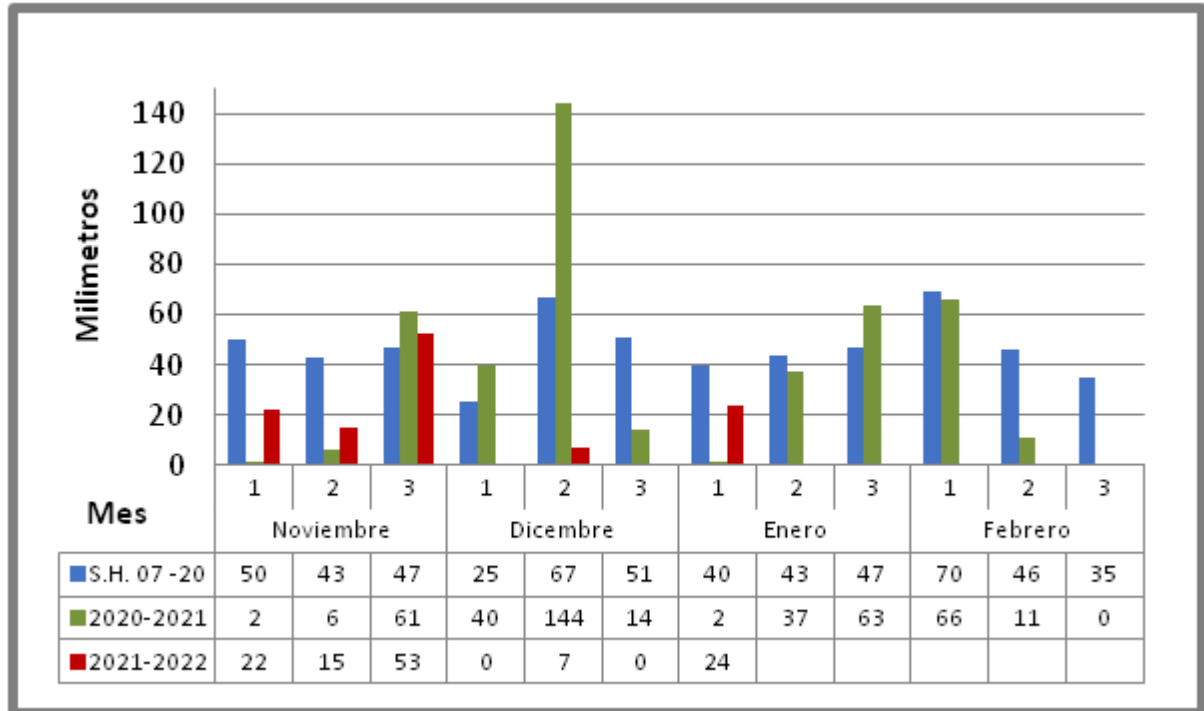
**RADIACIÓN SOLAR (Promedio cada 10 días) (\*)**



**EVAPORACIÓN TANQUE "A" (Acumulada mensual) (\*)**



**PRECIPITACIONES (Acumuladas decádicas) (\*)**



**TEMPERATURA MÁXIMA MAYOR O IGUAL A 34 °C**

| Número de días con temperatura máxima igual o mayor a 34 °C |           |          |          |           |          |          |          |          |          |          |          |          |
|---|-----------|----------|----------|-----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Día   | Diciembre |          |          |           | Enero    |          |          |          | Febrero  |          |          |          |
|   | 2019      | 2020     | 2021     | 2022      | 2019     | 2020     | 2021     | 2022     | 2019     | 2020     | 2021     | 2022     |
| 1   |           |          |          |           |          |          |          | 39.0     |          |          |          |          |
| 2   |           |          |          |           | 36.4     |          |          | 36.1     |          |          |          |          |
| 3   |           |          |          |           |          |          |          | 37.2     | 34.8     |          |          |          |
| 4   |           |          |          |           |          |          |          | 34.8     | 36.1     |          |          |          |
| 5   |           |          |          |           |          |          | 34.6     |          | 35.8     |          |          |          |
| 6   |           |          |          |           |          |          | 34.4     |          | 35.5     | 36.1     |          |          |
| 7   |           |          |          |           |          |          |          |          | 37.2     |          |          |          |
| 8   |           |          |          |           |          |          | 34.6     |          |          |          |          |          |
| 9   |           |          |          |           |          | 34.2     | 34.8     | 36.4     |          |          |          |          |
| 10  | 35.7      | 35       |          |           |          |          | 35.2     | 37.5     |          |          |          |          |
| <b>N° días</b>  | <b>1</b>  | <b>1</b> | <b>0</b> | <b>0</b>  | <b>1</b> | <b>1</b> | <b>5</b> | <b>6</b> | <b>1</b> | <b>5</b> | <b>0</b> | <b>0</b> |
| 11  |           | 35.8     | 34.6     |           |          |          | 34.6     |          |          |          |          |          |
| 12  |           |          |          |           |          | 34.1     |          |          |          |          |          |          |
| 13  |           |          |          |           |          | 34.9     |          |          | 35.6     |          |          |          |
| 14  |           |          |          |           |          | 34.2     |          |          |          |          |          |          |
| 15  |           |          |          |           |          |          |          |          |          |          |          |          |
| 16  |           |          |          |           |          |          |          |          |          |          |          |          |
| 17  |           |          |          |           |          |          |          |          |          |          |          |          |
| 18  |           |          |          |           |          |          |          |          |          |          |          |          |
| 19  |           |          |          | 35.9      |          | 34.9     |          |          | 34.9     |          |          |          |
| 20  |           |          |          | 39.7      |          |          |          |          | 35.4     |          |          |          |
| <b>N° días</b>  | <b>0</b>  | <b>1</b> | <b>1</b> | <b>2</b>  | <b>0</b> | <b>4</b> | <b>1</b> | <b>0</b> | <b>2</b> | <b>1</b> | <b>0</b> | <b>0</b> |
| 21  |           |          |          | 38.3      |          |          |          |          | 35.3     |          |          |          |
| 22  |           |          |          | 35.5      |          |          |          |          | 36.2     |          |          |          |
| 23  |           |          |          | 35        |          |          | 35       |          | 36.2     | 34.5     |          |          |
| 24  |           |          |          | 35.4      |          |          | 35.6     |          |          |          |          |          |
| 25  |           |          |          | 38        |          |          | 35.2     |          |          |          |          |          |
| 26  | 34.9      |          |          | 35.9      |          |          |          |          |          |          |          |          |
| 27  | 34.4      | 36       |          | 38.2      | 34.1     |          |          |          |          |          |          |          |
| 28  | 36        | 36.6     |          | 39.7      | 34.4     |          |          |          |          |          |          |          |
| 29  | 36        | 36.3     | 35.1     | 39.5      | 34.0     |          |          |          |          |          |          |          |
| 30  |           | 35.4     | 34.9     | 39.8      |          |          |          |          |          |          |          |          |
| 31  |           |          |          | 40        |          |          |          |          |          |          |          |          |
| <b>N° días</b>  | <b>4</b>  | <b>4</b> | <b>2</b> | <b>11</b> | <b>3</b> | <b>0</b> | <b>3</b> | <b>0</b> | <b>3</b> | <b>0</b> | <b>1</b> | <b>0</b> |

| Número de días con temperatura mínima igual o inferior a 15C° |          |          |          |          |          |          |          |          |          |          |          |          |
|---|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Día   | Enero    |          |          |          | Febrero  |          |          |          | Marzo    |          |          |          |
|   | 2019     | 2020     | 2021     | 2022     | 2019     | 2020     | 2021     | 2022     | 2019     | 2020     | 2021     | 2022     |
| 1   |          |          | 12.0     |          |          |          | 10.4     |          |          |          |          |          |
| 2   |          |          | 15       |          |          |          |          |          |          |          |          |          |
| 3   |          |          | 14.2     |          |          |          | 13.0     |          |          |          |          |          |
| 4   |          |          |          |          |          |          |          |          |          |          |          |          |
| 5   |          |          |          |          |          |          | 14.7     |          |          |          |          |          |
| 6   |          |          | 14       | 13       |          |          | 13.4     |          |          | 14.7     | 12       |          |
| 7   |          | 14.4     |          |          |          |          | 14.8     |          |          |          | 12       |          |
| 8   |          | 14.9     |          |          |          |          |          |          |          |          | 14.3     |          |
| 9   |          |          |          |          |          |          |          |          | 14.6     |          |          |          |
| 10  |          |          | 14.0     |          |          | 14.6     |          |          |          |          |          |          |
| <b>N° días</b>  | <b>0</b> | <b>2</b> | <b>5</b> | <b>1</b> | <b>0</b> | <b>1</b> | <b>5</b> | <b>0</b> | <b>1</b> | <b>1</b> | <b>3</b> | <b>0</b> |
| 11  |          |          |          |          |          |          |          |          |          |          | 14.8     |          |
| 12  |          |          |          |          |          |          |          |          |          |          |          |          |
| 13  |          |          |          |          | 12.1     |          |          |          |          |          |          |          |
| 14  |          |          |          |          |          |          |          |          |          |          | 15       |          |
| 15  |          |          |          |          |          |          |          |          |          |          |          |          |
| 16  |          |          |          |          |          |          |          |          |          |          |          |          |
| 17  |          | 13.6     | 12.4     |          |          |          | 14.9     |          |          |          |          |          |
| 18  |          |          | 11.9     |          |          |          | 14.3     |          |          |          | 11.7     |          |
| 19  |          |          |          |          |          |          |          |          |          |          | 13.8     |          |
| 20  |          |          |          |          |          |          |          |          | 14.4     |          |          |          |
| <b>N° días</b>  | <b>0</b> | <b>1</b> | <b>2</b> | <b>0</b> | <b>1</b> | <b>0</b> | <b>2</b> | <b>0</b> | <b>1</b> | <b>0</b> | <b>4</b> | <b>0</b> |
| 21  |          |          |          |          |          | 12.4     |          |          | 9.9      | 13.0     |          |          |
| 22  |          |          |          |          |          | 11.7     |          |          | 10.3     | 14.5     |          |          |
| 23  |          |          |          |          |          | 11.6     |          |          | 12.2     |          |          |          |
| 24  |          |          |          |          |          | 13.6     |          |          |          |          |          |          |
| 25  |          |          |          |          |          | 14.5     | 12.4     |          | 11.1     |          |          |          |
| 26  |          |          |          |          | 13.5     | 13       |          |          | 12.5     |          |          |          |
| 27  |          |          |          |          | 11.3     | 14.2     |          |          | 14.2     |          |          |          |
| 28  |          |          |          |          | 13.1     |          | 14.4     |          |          |          | 10.6     |          |
| 29  |          |          |          |          |          |          |          |          |          |          |          |          |
| 30  |          |          |          |          |          |          |          |          |          |          |          |          |
| 31  |          |          | 11.8     |          |          |          |          |          |          |          | 11       |          |
| <b>N° días</b>  | <b>0</b> | <b>0</b> | <b>1</b> | <b>0</b> | <b>3</b> | <b>7</b> | <b>2</b> | <b>0</b> | <b>6</b> | <b>2</b> | <b>2</b> | <b>0</b> |



## FECHAS ESPERADAS DE EVENTOS FENOLÓGICOS

### Metodología

Se usa la acumulación de temperatura por encima de 10°C, considerando la temperatura media (promedio de la T. Máxima y T. Mínima) con los siguientes límites:

Si T. Máxima > 34°C se considera 34°C como temperatura Máxima de ese día.

Si T. Mínima > 21°C se considera 21°C como temperatura Mínima de ese día.

Para la media se consideró el promedio de temperatura media por día (promedio de 1973/74-2020/21) y la acumulación térmica del cuadro 7 para cada variedad.

Para la zafra 2021/22 se considera los datos del cuadro 7 y la temperatura media de esta zafra por encima de 10°C con las restricciones establecidas.

CUADRO 1 - EL PASO 144

| Fecha de emergencia | Inicio macollaje |            |         | Primordio floral |            |         | 50% floración |            |         | Madurez fisiológica |            |         |
|---------------------|------------------|------------|---------|------------------|------------|---------|---------------|------------|---------|---------------------|------------|---------|
|                     | Media            | Días (+/-) | 2021/22 | Media            | Días (+/-) | 2021/22 | Media         | Días (+/-) | 2021/22 | Media               | Días (+/-) | 2021/22 |
| 01-Oct              | 23-Oct           | 2          | 25-Oct  | 13-Dic           | -3         | 10-Dic  | 11-Ene        | -8         | 03-Ene  | 11-Feb              | -9         | 02-Feb  |
| 10-Oct              | 30-Oct           | -1         | 29-Oct  | 18-Dic           | -6         | 12-Dic  | 15-Ene        | -9         | 06-Ene  | 16-Feb              | -10        | 06-Feb  |
| 20-Oct              | 07-Nov           | -3         | 04-Nov  | 25-Dic           | -9         | 16-Dic  | 21-Ene        | -10        | 11-Ene  | 22-Feb              | -12        | 10-Feb  |
| 30-Oct              | 17-Nov           | -5         | 12-Nov  | 31-Dic           | -7         | 24-Dic  | 27-Ene        | -9         | 18-Ene  | 01-Mar              | -10        | 19-Feb  |
| 10-Nov              | 26-Nov           | 0          | 26-Nov  | 07-Ene           | -6         | 01-Ene  | 03-Feb        | -6         | 28-Ene  | 09-Mar              | -7         | 02-Mar  |
| 20-Nov              | 05-Dic           | 0          | 05-Dic  | 14-Ene           | -4         | 10-Ene  | 10-Feb        | -5         | 05-Feb  | 17-Mar              | -6         | 11-Mar  |
| 30-Nov              | 14-Dic           | 0          | 14-Dic  | 22-Ene           | -4         | 18-Ene  | 19-Feb        | -4         | 15-Feb  | 28-Mar              | -5         | 23-Mar  |

CUADRO 2 - INIA TACUARÍ

| Fecha de emergencia | Inicio macollaje |            |         | Primordio floral |            |         | 50% floración |            |         | Madurez fisiológica |            |         |
|---------------------|------------------|------------|---------|------------------|------------|---------|---------------|------------|---------|---------------------|------------|---------|
|                     | Media            | Días (+/-) | 2021/22 | Media            | Días (+/-) | 2021/22 | Media         | Días (+/-) | 2021/22 | Media               | Días (+/-) | 2021/22 |
| 01-Oct              | 26-Oct           | 1          | 27-Oct  | 08-Dic           | -3         | 05-Dic  | 31-Dic        | -7         | 24-Dic  | 04-Feb              | -9         | 26-Ene  |
| 10-Oct              | 02-Nov           | -2         | 31-Oct  | 13-Dic           | -6         | 07-Dic  | 04-Ene        | -8         | 27-Dic  | 08-Feb              | -10        | 29-Ene  |
| 20-Oct              | 11-Nov           | -4         | 07-Nov  | 19-Dic           | -7         | 12-Dic  | 09-Ene        | -9         | 31-Dic  | 14-Feb              | -11        | 03-Feb  |
| 30-Oct              | 19-Nov           | -4         | 15-Nov  | 26-Dic           | -6         | 20-Dic  | 16-Ene        | -9         | 07-Ene  | 20-Feb              | -9         | 11-Feb  |
| 10-Nov              | 28-Nov           | 0          | 28-Nov  | 02-Ene           | -4         | 29-Dic  | 23-Ene        | -6         | 17-Ene  | 28-Feb              | -7         | 21-Feb  |
| 20-Nov              | 07-Dic           | 0          | 07-Dic  | 09-Ene           | -4         | 05-Ene  | 30-Ene        | -5         | 25-Ene  | 08-Mar              | -5         | 03-Mar  |
| 30-Nov              | 17-Dic           | -2         | 15-Dic  | 17-Ene           | -4         | 13-Ene  | 07-Feb        | -4         | 03-Feb  | 18-Mar              | -5         | 13-Mar  |

CUADRO 3 - INIA OLIMAR

| Fecha de emergencia | Inicio macollaje |            |         | Primordio floral |            |         | 50% floración |            |         | Madurez fisiológica |            |         |
|---------------------|------------------|------------|---------|------------------|------------|---------|---------------|------------|---------|---------------------|------------|---------|
|                     | Media            | Días (+/-) | 2021/22 | Media            | Días (+/-) | 2021/22 | Media         | Días (+/-) | 2021/22 | Media               | Días (+/-) | 2021/22 |
| 01-Oct              | 22-Oct           | 3          | 25-Oct  | 06-Dic           | -3         | 03-Dic  | 02-Ene        | -7         | 26-Dic  | 03-Feb              | -9         | 25-Ene  |
| 10-Oct              | 29-Oct           | -1         | 28-Oct  | 11-Dic           | -7         | 04-Dic  | 06-Ene        | -7         | 30-Dic  | 07-Feb              | -10        | 28-Ene  |
| 20-Oct              | 07-Nov           | -4         | 03-Nov  | 18-Dic           | -8         | 10-Dic  | 12-Ene        | -10        | 02-Ene  | 13-Feb              | -11        | 02-Feb  |
| 30-Oct              | 16-Nov           | -4         | 12-Nov  | 25-Dic           | -7         | 18-Dic  | 18-Ene        | -8         | 10-Ene  | 20-Feb              | -10        | 10-Feb  |
| 10-Nov              | 25-Nov           | 0          | 25-Nov  | 01-Ene           | -4         | 28-Dic  | 25-Ene        | -6         | 19-Ene  | 28-Feb              | -7         | 21-Feb  |
| 20-Nov              | 04-Dic           | 0          | 04-Dic  | 08-Ene           | -4         | 04-Ene  | 01-Feb        | -5         | 27-Ene  | 07-Mar              | -5         | 02-Mar  |
| 30-Nov              | 13-Dic           | 0          | 13-Dic  | 16-Ene           | -4         | 12-Ene  | 09-Feb        | -4         | 05-Feb  | 17-Mar              | -5         | 12-Mar  |

CUADRO 4 - INIA MERÍN

| Fecha de emergencia | Inicio macollaje |            |         | Primordio floral |            |         | 50% floración |            |         | Madurez fisiológica |            |         |
|---------------------|------------------|------------|---------|------------------|------------|---------|---------------|------------|---------|---------------------|------------|---------|
|                     | Media            | Días (+/-) | 2021/22 | Media            | Días (+/-) | 2021/22 | Media         | Días (+/-) | 2021/22 | Media               | Días (+/-) | 2021/22 |
| 01-Oct              | 21-Oct           | 2          | 23-Oct  | 05-Dic           | -3         | 02-Dic  | 16-Ene        | -8         | 08-Ene  | 24-Feb              | -9         | 15-Feb  |
| 10-Oct              | 27-Oct           | 0          | 27-Oct  | 10-Dic           | -6         | 04-Dic  | 21-Ene        | -9         | 12-Ene  | 01-Mar              | -11        | 18-Feb  |
| 20-Oct              | 05-Nov           | -3         | 02-Nov  | 17-Dic           | -8         | 09-Dic  | 26-Ene        | -10        | 16-Ene  | 07-Mar              | -12        | 23-Feb  |
| 30-Oct              | 14-Nov           | -4         | 10-Nov  | 24-Dic           | -7         | 17-Dic  | 01-Feb        | -9         | 23-Ene  | 15-Mar              | -11        | 04-Mar  |
| 10-Nov              | 24-Nov           | 0          | 24-Nov  | 31-Dic           | -4         | 27-Dic  | 09-Feb        | -7         | 02-Feb  | 24-Mar              | -8         | 16-Mar  |
| 20-Nov              | 03-Dic           | 0          | 03-Dic  | 07-Ene           | -4         | 03-Ene  | 16-Feb        | -5         | 11-Feb  | 03-Abr              | -7         | 27-Mar  |
| 30-Nov              | 12-Dic           | 0          | 12-Dic  | 15-Ene           | -3         | 12-Ene  | 25-Feb        | -5         | 20-Feb  | 15-Abr              | -7         | 08-Abr  |

CUADRO 5 - 9197\*

| Fecha de emergencia | Inicio macollaje |            |         | Primordio floral |            |         | 50% floración |            |         | Madurez fisiológica |            |         |
|---------------------|------------------|------------|---------|------------------|------------|---------|---------------|------------|---------|---------------------|------------|---------|
|                     | Media            | Días (+/-) | 2021/22 | Media            | Días (+/-) | 2021/22 | Media         | Días (+/-) | 2021/22 | Media               | Días (+/-) | 2021/22 |
| 01-Oct              | 20-Oct           | 3          | 23-Oct  | 09-Dic           | -5         | 04-Dic  | 18-Ene        | -9         | 09-Ene  | 23-Feb              | -9         | 14-Feb  |
| 10-Oct              | 27-Oct           | 0          | 27-Oct  | 14-Dic           | -6         | 08-Dic  | 22-Ene        | -10        | 12-Ene  | 28-Feb              | -11        | 17-Feb  |
| 20-Oct              | 05-Nov           | -4         | 01-Nov  | 21-Dic           | -9         | 12-Dic  | 27-Ene        | -10        | 17-Ene  | 06-Mar              | -12        | 22-Feb  |
| 30-Oct              | 14-Nov           | -4         | 10-Nov  | 28-Dic           | -7         | 21-Dic  | 03-Feb        | -9         | 25-Ene  | 13-Mar              | -10        | 03-Mar  |
| 10-Nov              | 24-Nov           | 0          | 24-Nov  | 04-Ene           | -5         | 30-Dic  | 10-Feb        | -6         | 04-Feb  | 23-Mar              | -8         | 15-Mar  |
| 20-Nov              | 02-Dic           | 0          | 02-Dic  | 11-Ene           | -4         | 07-Ene  | 18-Feb        | -6         | 12-Feb  | 01-Abr              | -6         | 26-Mar  |
| 30-Nov              | 12-Dic           | 0          | 12-Dic  | 19-Ene           | -4         | 15-Ene  | 26-Feb        | -4         | 22-Feb  | 13-Abr              | -6         | 07-Abr  |

CUADRO 6 - 9193\*

| Fecha de emergencia | Inicio macollaje |            |         | Primordio floral |            |         | 50% floración |            |         | Madurez fisiológica |            |         |
|---------------------|------------------|------------|---------|------------------|------------|---------|---------------|------------|---------|---------------------|------------|---------|
|                     | Media            | Días (+/-) | 2021/22 | Media            | Días (+/-) | 2021/22 | Media         | Días (+/-) | 2021/22 | Media               | Días (+/-) | 2021/22 |
| 01-Oct              | 19-Oct           | 3          | 22-Oct  | 28-Nov           | -3         | 25-Nov  | 12-Ene        | -8         | 04-Ene  | 18-Feb              | -9         | 09-Feb  |
| 10-Oct              | 26-Oct           | 0          | 26-Oct  | 04-Dic           | -5         | 29-Nov  | 16-Ene        | -9         | 07-Ene  | 23-Feb              | -10        | 13-Feb  |
| 20-Oct              | 04-Nov           | -4         | 31-Oct  | 11-Dic           | -8         | 03-Dic  | 22-Ene        | -11        | 11-Ene  | 01-Mar              | -11        | 18-Feb  |
| 30-Oct              | 13-Nov           | -4         | 09-Nov  | 18-Dic           | -6         | 12-Dic  | 28-Ene        | -9         | 19-Ene  | 08-Mar              | -10        | 26-Feb  |
| 10-Nov              | 23-Nov           | 0          | 23-Nov  | 26-Dic           | -5         | 21-Dic  | 04-Feb        | -6         | 29-Ene  | 17-Mar              | -8         | 09-Mar  |
| 20-Nov              | 02-Dic           | 0          | 02-Dic  | 02-Ene           | -3         | 30-Dic  | 11-Feb        | -5         | 06-Feb  | 26-Mar              | -7         | 19-Mar  |
| 30-Nov              | 11-Dic           | 0          | 11-Dic  | 10-Ene           | -4         | 06-Ene  | 20-Feb        | -4         | 16-Feb  | 06-Abr              | -6         | 31-Mar  |

CUADRO 7 - REQUERIMIENTOS TÉRMICOS PARA 6 VARIEDADES (SUMA TÉRMICA EN GRADOS DÍAS)

|                        | EP 144   |              | INIA Tacuarí |              | INIA Olimar |              | INIA Merín |          | 9197 *   | 9193 * |
|------------------------|----------|--------------|--------------|--------------|-------------|--------------|------------|----------|----------|--------|
|                        | Ac. Tér. | DE G.D.(+/-) | Ac. Tér.     | DE G.D.(+/-) | Ac. Tér.    | DE G.D.(+/-) | Ac. Tér.   | Ac. Tér. | Ac. Tér. |        |
| Em.-In. Mac.           | 183      | 30           | 214          | 40           | 174         | 29           | 160        | 158      | 147      |        |
| Em.-Prim.              | 743      | 59           | 674          | 73           | 650         | 37           | 640        | 693      | 560      |        |
| Em.-50% Flor.          | 1147     | 65           | 978          | 68           | 1011        | 46           | 1225       | 1246     | 1160     |        |
| 50% Flor.-Mad. Fisiol. | 437      | 70           | 492          | 59           | 468         | 37           | 562        | 525      | 543      |        |
| Em.-Mad.               | 1607     | 98           | 1495         | 82           | 1486        | 78           | 1771       | 1771     | 1703     |        |

Em.-Prim.= Emergencia - Primordio floral

50% Flor.-Mad. Fisiol.= 50% Floración - Madurez fisiológica

Em.-Mad.= Emergencia - Madurez Fisiológica

\* datos correspondientes a 1 año de evaluación.

Em.-In. Mac.= Emergencia - Iniciación del macollaje Ac. Tér.= Acumulación térmica en grados días

Em.-50% Flor.= Emergencia - 50% Floración

Días (+/-) = diferencia entre lo previsto y la presente zafra

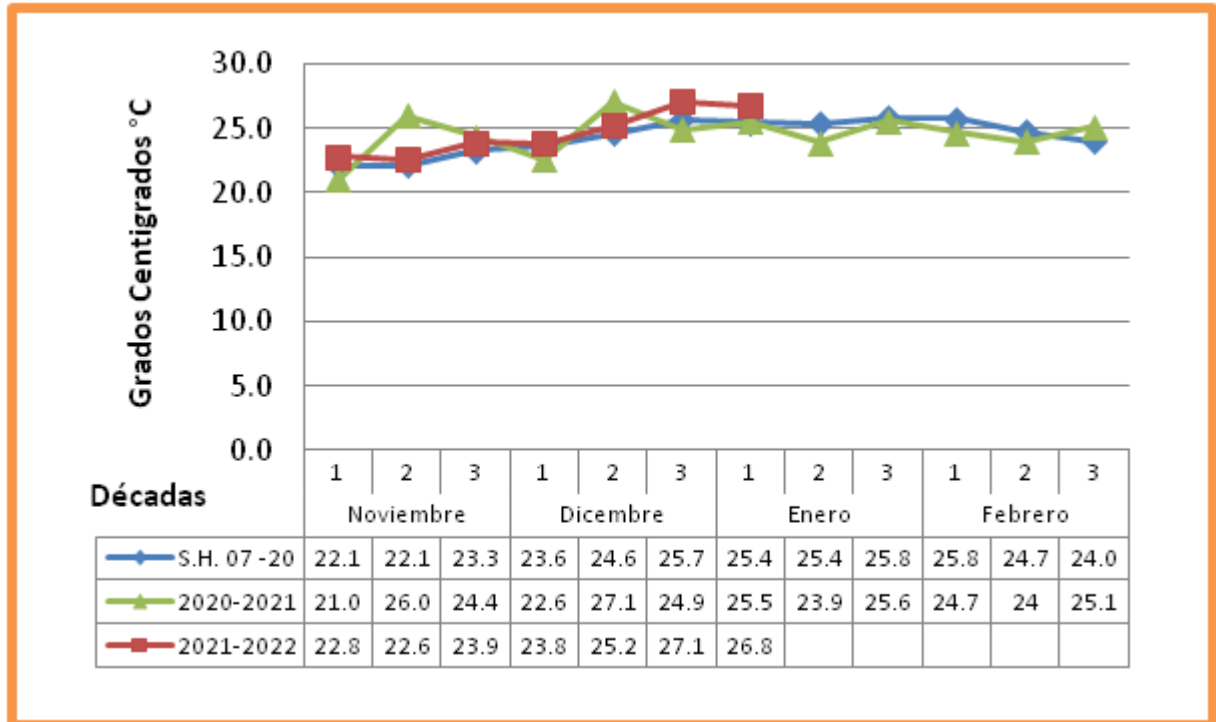
Media = Fecha esperada calculada con la suma térmica

para cada período y la temperatura media diaria histórica

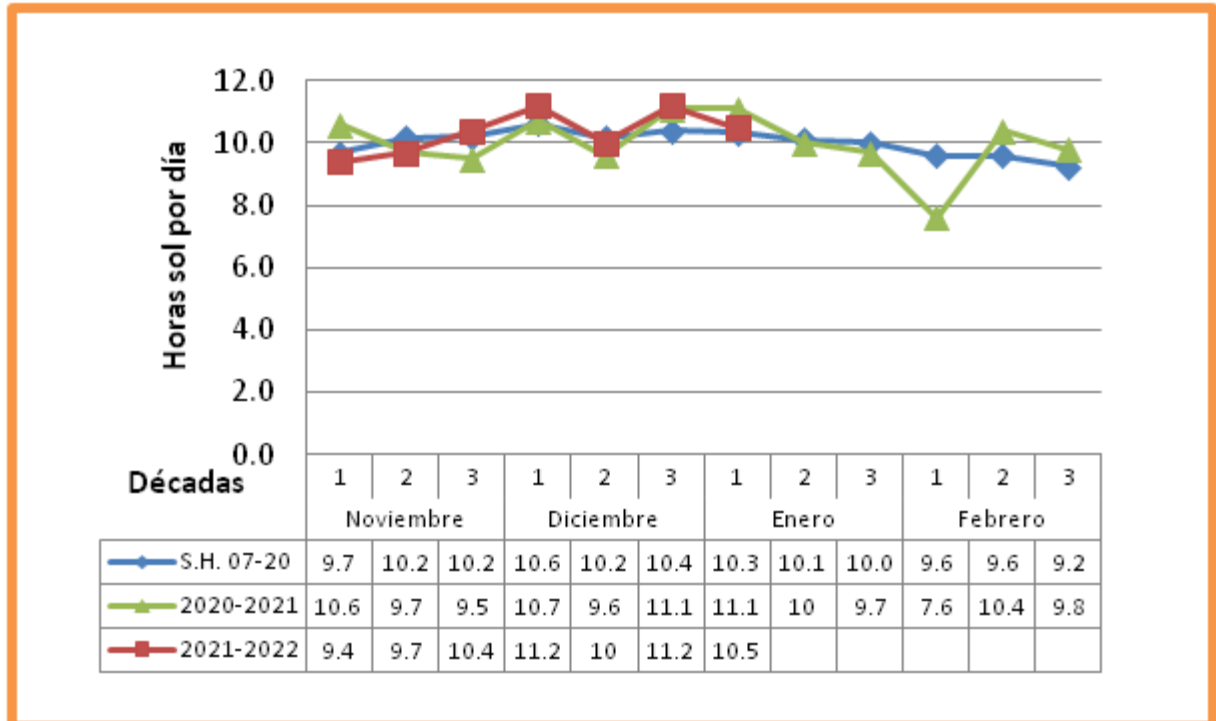
DE G.D.(+/-)= mas-menos 1 desvío estándar en grados días

VOLVER

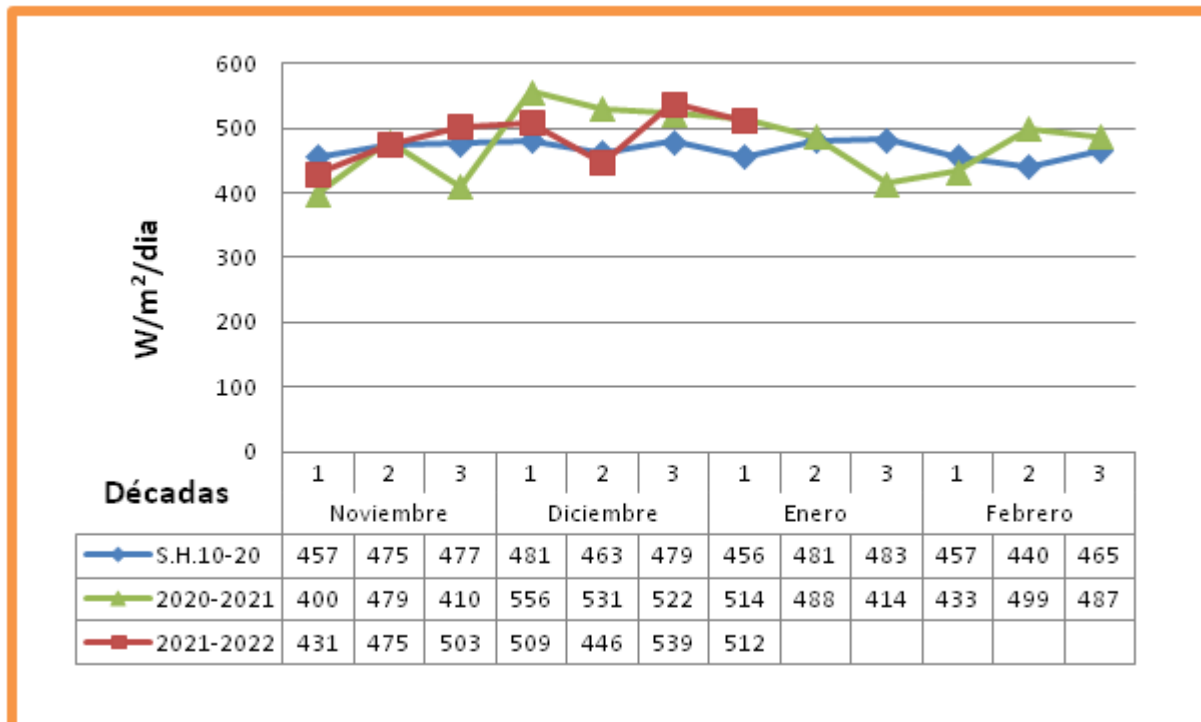
**TEMPERATURA MEDIA (Promedio cada 10 días) (\*)**



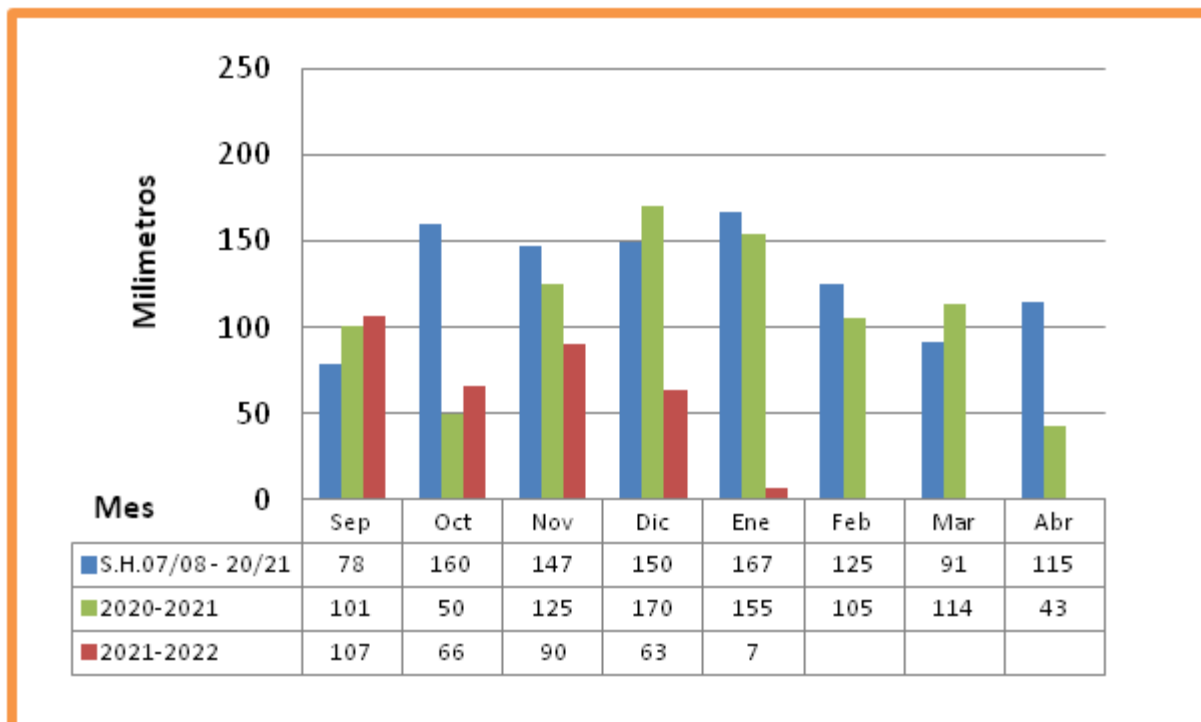
**HORAS DE SOL (Promedio cada 10 días) (\*)**



**RADIACIÓN SOLAR (Promedio cada 10 días) (\*)**



**PRECIPITACIONES (Acumuladas decádicas) (\*)**



Estación meteorológica de ALUR – Bella Unión - Artigas

| Número de días con temperatura mínima igual o inferior a 15C° |          |          |          |          |          |          |          |          |          |          |          |          |
|---|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Día   | Enero    |          |          |          | Febrero  |          |          |          | Marzo    |          |          |          |
|   | 2019     | 2020     | 2021     | 2022     | 2019     | 2020     | 2021     | 2022     | 2019     | 2020     | 2021     | 2022     |
| 1   |          |          | 14.1     |          |          |          |          |          |          |          |          |          |
| 2   |          |          |          |          |          |          |          |          |          |          |          |          |
| 3   |          |          |          |          |          |          |          |          |          |          |          |          |
| 4   |          |          |          |          |          |          |          |          |          |          |          |          |
| 5   |          |          |          |          |          |          |          |          |          |          |          |          |
| 6   |          |          |          | 15       |          |          |          |          |          |          | 14.1     |          |
| 7   |          | 14.9     |          |          |          |          |          |          |          |          | 14.1     |          |
| 8   |          |          |          |          |          |          |          |          |          |          |          |          |
| 9   |          |          |          |          |          |          |          |          | 14.6     |          |          |          |
| 10  |          |          |          |          |          |          |          |          | 13.9     |          |          |          |
| <b>N° días</b>  | <b>0</b> | <b>1</b> | <b>1</b> | <b>1</b> | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b> | <b>2</b> | <b>0</b> | <b>2</b> | <b>0</b> |
| 11  |          |          |          |          |          | 14.9     |          |          |          |          |          |          |
| 12  |          |          |          |          |          |          |          |          |          |          |          |          |
| 13  |          |          |          |          | 14.5     |          |          |          |          |          |          |          |
| 14  |          |          |          |          | 11.8     |          |          |          | 14.8     |          |          |          |
| 15  |          |          |          |          |          |          |          |          | 14.7     |          |          |          |
| 16  |          |          |          |          |          |          |          |          |          |          |          |          |
| 17  |          | 13.2     |          |          |          |          |          |          |          |          |          |          |
| 18  |          |          | 14.9     |          |          |          |          |          |          |          | 14.6     |          |
| 19  |          |          |          |          |          | 14.8     |          |          |          |          | 14.1     |          |
| 20  |          |          |          |          |          |          |          |          | 14.2     | 14.8     |          |          |
| <b>N° días</b>  | <b>0</b> | <b>1</b> | <b>1</b> | <b>0</b> | <b>2</b> | <b>2</b> | <b>0</b> | <b>0</b> | <b>3</b> | <b>1</b> | <b>2</b> | <b>0</b> |
| 21  |          |          |          |          |          | 12.6     |          |          | 9.6      | 13.9     |          |          |
| 22  |          |          |          |          |          | 10.4     |          |          | 10.1     | 14.6     |          |          |
| 23  |          |          |          |          |          | 11.9     |          |          | 11.9     | 14.7     |          |          |
| 24  |          |          |          |          |          | 14.4     |          |          | 14.5     |          |          |          |
| 25  |          |          |          |          |          |          |          |          | 10.7     |          |          |          |
| 26  |          |          |          |          | 13.6     | 12.5     |          |          | 12.2     |          |          |          |
| 27  |          |          |          |          | 10.4     | 13.7     |          |          | 13.2     |          |          |          |
| 28  |          |          |          |          | 11.6     |          |          |          | 14.5     |          | 14.8     |          |
| 29  |          |          |          |          |          |          |          |          |          |          | 14.8     |          |
| 30  |          |          |          |          |          |          |          |          |          |          |          |          |
| 31  |          |          |          |          |          |          |          |          |          |          | 14.3     |          |
| <b>N° días</b>  | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b> | <b>3</b> | <b>6</b> | <b>0</b> | <b>0</b> | <b>8</b> | <b>3</b> | <b>3</b> | <b>0</b> |

# Estación meteorológica de ALUR – Bella Unión - Artigas

## FECHAS ESPERADAS DE EVENTOS FENOLÓGICOS

### Metodología

Se usa la acumulación de temperatura por encima de 10°C, considerando la temperatura media (promedio de la T. Máxima y T. Mínima)

con los siguientes límites:

Si T. Máxima > 34°C se considera 34°C como temperatura Máxima de ese día.

Si T. Mínima > 21°C se considera 21°C como temperatura Mínima de ese día.

Para la media se consideró el promedio de temperatura media por día (promedio de 1973/74-2020/21) y la acumulación térmica del cuadro 7 para cada variedad.

Para la zafra 2021/22 se considera los datos del cuadro 7 y la temperatura media de esta zafra por encima de 10°C con las restricciones establecidas.

CUADRO 1 - EL PASO 144

| Fecha de emergencia | Inicio macollaje |            |         | Primordio floral |            |         | 50% floración |            |         | Madurez fisiológica |            |         |
|---------------------|------------------|------------|---------|------------------|------------|---------|---------------|------------|---------|---------------------|------------|---------|
|                     | Media            | Días (+/-) | 2021/22 | Media            | Días (+/-) | 2021/22 | Media         | Días (+/-) | 2021/22 | Media               | Días (+/-) | 2021/22 |
| 01-Oct              | 23-Oct           | 0          | 23-Oct  | 13-Dic           | -8         | 05-Dic  | 11-Ene        | -11        | 31-Dic  | 12-Feb              | -13        | 30-Ene  |
| 10-Oct              | 30-Oct           | -2         | 28-Oct  | 18-Dic           | -8         | 10-Dic  | 15-Ene        | -11        | 04-Ene  | 17-Feb              | -13        | 04-Feb  |
| 20-Oct              | 07-Nov           | -4         | 03-Nov  | 24-Dic           | -9         | 15-Dic  | 21-Ene        | -11        | 10-Ene  | 23-Feb              | -13        | 10-Feb  |
| 30-Oct              | 16-Nov           | -4         | 12-Nov  | 30-Dic           | -7         | 23-Dic  | 28-Ene        | -11        | 17-Ene  | 03-Mar              | -12        | 19-Feb  |
| 10-Nov              | 26-Nov           | 0          | 26-Nov  | 07-Ene           | -6         | 01-Ene  | 05-Feb        | -9         | 27-Ene  | 12-Mar              | -10        | 02-Mar  |
| 20-Nov              | 05-Dic           | 0          | 05-Dic  | 15-Ene           | -6         | 09-Ene  | 12-Feb        | -7         | 05-Feb  | 22-Mar              | -10        | 12-Mar  |
| 30-Nov              | 14-Dic           | 0          | 14-Dic  | 23-Ene           | -6         | 17-Ene  | 21-Feb        | -6         | 15-Feb  | 01-Abr              | -7         | 25-Mar  |

CUADRO 2 - INIA TACUARI

| Fecha de emergencia | Inicio macollaje |            |         | Primordio floral |            |         | 50% floración |            |         | Madurez fisiológica |            |         |
|---------------------|------------------|------------|---------|------------------|------------|---------|---------------|------------|---------|---------------------|------------|---------|
|                     | Media            | Días (+/-) | 2021/22 | Media            | Días (+/-) | 2021/22 | Media         | Días (+/-) | 2021/22 | Media               | Días (+/-) | 2021/22 |
| 01-Oct              | 27-Oct           | -1         | 26-Oct  | 07-Dic           | -5         | 02-Dic  | 30-Dic        | -7         | 23-Dic  | 04-Feb              | -12        | 23-Ene  |
| 10-Oct              | 02-Nov           | -3         | 30-Oct  | 12-Dic           | -8         | 04-Dic  | 03-Ene        | -9         | 25-Dic  | 09-Feb              | -13        | 27-Ene  |
| 20-Oct              | 10-Nov           | -4         | 06-Nov  | 18-Dic           | -7         | 11-Dic  | 09-Ene        | -10        | 30-Dic  | 15-Feb              | -13        | 02-Feb  |
| 30-Oct              | 18-Nov           | -3         | 15-Nov  | 25-Dic           | -6         | 19-Dic  | 16-Ene        | -9         | 07-Ene  | 22-Feb              | -12        | 10-Feb  |
| 10-Nov              | 28-Nov           | 0          | 28-Nov  | 02-Ene           | -5         | 28-Dic  | 24-Ene        | -9         | 15-Ene  | 03-Mar              | -10        | 21-Feb  |
| 20-Nov              | 07-Dic           | -2         | 05-Dic  | 10-Ene           | -6         | 04-Ene  | 31-Ene        | -7         | 24-Ene  | 11-Mar              | -8         | 03-Mar  |
| 30-Nov              | 16-Dic           | 0          | 16-Dic  | 18-Ene           | -6         | 12-Ene  | 08-Feb        | -5         | 03-Feb  | 22-Mar              | -8         | 14-Mar  |

CUADRO 3 - INIA OLIMAR

| Fecha de emergencia | Inicio macollaje |            |         | Primordio floral |            |         | 50% floración |            |         | Madurez fisiológica |            |         |
|---------------------|------------------|------------|---------|------------------|------------|---------|---------------|------------|---------|---------------------|------------|---------|
|                     | Media            | Días (+/-) | 2021/22 | Media            | Días (+/-) | 2021/22 | Media         | Días (+/-) | 2021/22 | Media               | Días (+/-) | 2021/22 |
| 01-Oct              | 22-Oct           | 0          | 22-Oct  | 05-Dic           | -5         | 30-Nov  | 01-Ene        | -9         | 23-Dic  | 04-Feb              | -13        | 22-Ene  |
| 10-Oct              | 29-Oct           | -2         | 27-Oct  | 10-Dic           | -8         | 02-Dic  | 06-Ene        | -10        | 27-Dic  | 08-Feb              | -13        | 26-Ene  |
| 20-Oct              | 06-Nov           | -4         | 02-Nov  | 17-Dic           | -8         | 09-Dic  | 11-Ene        | -10        | 01-Ene  | 14-Feb              | -13        | 01-Feb  |
| 30-Oct              | 15-Nov           | -4         | 11-Nov  | 24-Dic           | -7         | 17-Dic  | 18-Ene        | -9         | 09-Ene  | 21-Feb              | -11        | 10-Feb  |
| 10-Nov              | 25-Nov           | 0          | 25-Nov  | 01-Ene           | -5         | 27-Dic  | 26-Ene        | -8         | 18-Ene  | 02-Mar              | -9         | 21-Feb  |
| 20-Nov              | 04-Dic           | 0          | 04-Dic  | 08-Ene           | -5         | 03-Ene  | 03-Feb        | -8         | 26-Ene  | 10-Mar              | -8         | 02-Mar  |
| 30-Nov              | 13-Dic           | 0          | 13-Dic  | 17-Ene           | -6         | 11-Ene  | 11-Feb        | -6         | 05-Feb  | 21-Mar              | -8         | 13-Mar  |

CUADRO 4 - INIA Merin

| Fecha de emergencia | Inicio macollaje |            |         | Primordio floral |            |         | 50% floración |            |         | Madurez fisiológica |            |         |
|---------------------|------------------|------------|---------|------------------|------------|---------|---------------|------------|---------|---------------------|------------|---------|
|                     | Media            | Días (+/-) | 2021/22 | Media            | Días (+/-) | 2021/22 | Media         | Días (+/-) | 2021/22 | Media               | Días (+/-) | 2021/22 |
| 01-Oct              | 21-Oct           | -1         | 20-Oct  | 05-Dic           | -6         | 29-Nov  | 16-Ene        | -9         | 07-Ene  | 26-Feb              | -14        | 12-Feb  |
| 10-Oct              | 28-Oct           | -2         | 26-Oct  | 10-Dic           | -6         | 04-Dic  | 21-Ene        | -10        | 11-Ene  | 03-Mar              | -14        | 17-Feb  |
| 20-Oct              | 05-Nov           | -4         | 01-Nov  | 16-Dic           | -8         | 08-Dic  | 26-Ene        | -12        | 14-Ene  | 09-Mar              | -14        | 23-Feb  |
| 30-Oct              | 13-Nov           | -3         | 10-Nov  | 23-Dic           | -7         | 16-Dic  | 02-Feb        | -11        | 22-Ene  | 17-Mar              | -13        | 04-Mar  |
| 10-Nov              | 24-Nov           | 0          | 24-Nov  | 31-Dic           | -5         | 26-Dic  | 10-Feb        | -8         | 02-Feb  | 29-Mar              | -12        | 17-Mar  |
| 20-Nov              | 03-Dic           | 0          | 03-Dic  | 07-Ene           | -5         | 02-Ene  | 18-Feb        | -8         | 10-Feb  | 05-Abr              | -7         | 29-Mar  |
| 30-Nov              | 12-Dic           | 0          | 12-Dic  | 16-Ene           | -6         | 10-Ene  | 27-Feb        | -6         | 21-Feb  | 20-Abr              | -6         | 14-Abr  |

CUADRO 5 - 9197\*

| Fecha de emergencia | Inicio macollaje |            |         | Primordio floral |            |         | 50% floración |            |         | Madurez fisiológica |            |         |
|---------------------|------------------|------------|---------|------------------|------------|---------|---------------|------------|---------|---------------------|------------|---------|
|                     | Media            | Días (+/-) | 2021/22 | Media            | Días (+/-) | 2021/22 | Media         | Días (+/-) | 2021/22 | Media               | Días (+/-) | 2021/22 |
| 01-Oct              | 21-Oct           | -1         | 20-Oct  | 09-Dic           | -5         | 04-Dic  | 18-Ene        | -11        | 07-Ene  | 25-Feb              | -14        | 11-Feb  |
| 10-Oct              | 28-Oct           | -2         | 26-Oct  | 14-Dic           | -8         | 06-Dic  | 22-Ene        | -11        | 11-Ene  | 02-Mar              | -14        | 16-Feb  |
| 20-Oct              | 05-Nov           | -4         | 01-Nov  | 20-Dic           | -7         | 13-Dic  | 28-Ene        | -13        | 15-Ene  | 08-Mar              | -14        | 22-Feb  |
| 30-Oct              | 13-Nov           | -3         | 10-Nov  | 27-Dic           | -6         | 21-Dic  | 03-Feb        | -10        | 24-Ene  | 16-Mar              | -13        | 03-Mar  |
| 10-Nov              | 24-Nov           | 0          | 24-Nov  | 04-Ene           | -6         | 29-Dic  | 12-Feb        | -9         | 03-Feb  | 27-Mar              | -11        | 16-Mar  |
| 20-Nov              | 02-Dic           | 0          | 02-Dic  | 11-Ene           | -5         | 06-Ene  | 19-Feb        | -7         | 12-Feb  | 03-Abr              | -6         | 28-Mar  |
| 30-Nov              | 12-Dic           | 0          | 12-Dic  | 20-Ene           | -6         | 14-Ene  | 01-Mar        | -7         | 22-Feb  | 18-Abr              | -4         | 14-Abr  |

CUADRO 6 - 9193\*

| Fecha de emergencia | Inicio macollaje |            |         | Primordio floral |            |         | 50% floración |            |         | Madurez fisiológica |            |         |
|---------------------|------------------|------------|---------|------------------|------------|---------|---------------|------------|---------|---------------------|------------|---------|
|                     | Media            | Días (+/-) | 2021/22 | Media            | Días (+/-) | 2021/22 | Media         | Días (+/-) | 2021/22 | Media               | Días (+/-) | 2021/22 |
| 01-Oct              | 20-Oct           | -1         | 19-Oct  | 28-Nov           | -6         | 22-Nov  | 12-Ene        | -11        | 01-Ene  | 20-Feb              | -14        | 06-Feb  |
| 10-Oct              | 26-Oct           | -1         | 25-Oct  | 03-Dic           | -5         | 28-Nov  | 16-Ene        | -11        | 05-Ene  | 24-Feb              | -13        | 11-Feb  |
| 20-Oct              | 03-Nov           | -3         | 31-Oct  | 10-Dic           | -5         | 05-Dic  | 22-Ene        | -11        | 11-Ene  | 03-Mar              | -14        | 17-Feb  |
| 30-Oct              | 12-Nov           | -3         | 09-Nov  | 16-Dic           | -5         | 11-Dic  | 28-Ene        | -10        | 18-Ene  | 10-Mar              | -12        | 26-Feb  |
| 10-Nov              | 23-Nov           | 0          | 23-Nov  | 25-Dic           | -3         | 22-Dic  | 06-Feb        | -9         | 28-Ene  | 21-Mar              | -11        | 10-Mar  |
| 20-Nov              | 01-Dic           | 0          | 01-Dic  | 02-Ene           | -4         | 29-Dic  | 13-Feb        | -7         | 06-Feb  | 31-Mar              | -10        | 21-Mar  |
| 30-Nov              | 11-Dic           | 0          | 11-Dic  | 10-Ene           | -4         | 06-Ene  | 22-Feb        | -6         | 16-Feb  | 07-Abr              | -5         | 02-Abr  |

CUADRO 7 - REQUERIMIENTOS TÉRMICOS PARA 6 VARIEDADES (SUMA TÉRMICA EN GRADOS DÍAS)

|                         | EP 144   |              | INIA Tacuarí |              | INIA Olimar |              | INIA Merin |              | 9197 *   |              | 9193 *   |              |
|-------------------------|----------|--------------|--------------|--------------|-------------|--------------|------------|--------------|----------|--------------|----------|--------------|
|                         | Ac. Tér. | DE G.D.(+/-) | Ac. Tér.     | DE G.D.(+/-) | Ac. Tér.    | DE G.D.(+/-) | Ac. Tér.   | DE G.D.(+/-) | Ac. Tér. | DE G.D.(+/-) | Ac. Tér. | DE G.D.(+/-) |
| Em.-In. Mac.            | 183      | 30           | 214          | 40           | 174         | 29           | 160        | 158          | 147      |              |          |              |
| Em.-Prim.               | 743      | 59           | 674          | 73           | 650         | 37           | 640        | 693          | 560      |              |          |              |
| Em.-50% Flor.           | 1147     | 65           | 978          | 68           | 1011        | 46           | 1225       | 1246         | 1160     |              |          |              |
| 50% Flor.- Mad. Fisiol. | 437      | 70           | 492          | 59           | 468         | 37           | 562        | 525          | 543      |              |          |              |
| Em.-Mad.                | 1607     | 98           | 1495         | 82           | 1486        | 78           | 1785       | 1771         | 1703     |              |          |              |

Em.-Prim.= Emergencia - Primordio floral

50% Flor.-Mad. Fisiol.= 50% Floración - Madurez fisiológica

Em.-Mad.= Emergencia - Madurez Fisiológica

\* datos correspondientes a 1 año de evaluación.

Em.-In. Mac.= Emergencia - Iniciación del macollaje Ac. Tér.= Acumulación térmica en grados días

Em.-50% Flor.= Emergencia - 50% Floración

Días (+/-) = diferencia entre lo previsto y la presente zafra

Media = Fecha esperada calculada con la suma térmica

para cada período y la temperatura media diaria histórica

DE G.D.(+/-)= mas-menos 1 desvío estándar en grados días

VOLVER