Pirol NN

Maturity	early maincrop
Tubers	round oval, high number of medium sized tubers with shallow eyes and slightly netted skin, light yellow to yellow flesh
Plant	medium tall to tall, semi-erect, very rapid and strong development of foliage, blue-violet flowers in moderate frequency

Resistance to:

Viruses:	PVY- medium / PLRV- medium
Nematodes:	Ro1 and Ro4
Potato Wart Disease:	pathotype D1
Foliage Blight:	medium
Common Scab:	medium to high

Yield	high, high dry matter content (ca.18% starch), low reducing sugar content
Storability	very good, long dormancy

Additional Remarks

excellent chip variety suitable for long term storage, resistant to bruising

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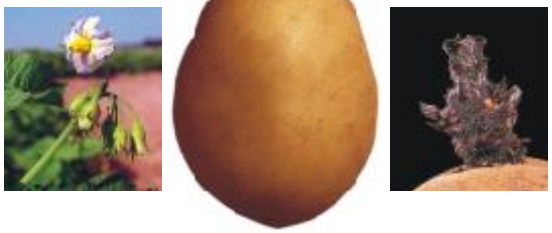
Pirol NN

Special advice for chip production

NORIKA

Special Instructions for the potato variety PIROL



Preparation and Planting

Seeds: Upon receipt seeds should immediately be taken out of their packing, big bags or jute bags. It is highly recommended to condition seed for planting or even to pre sprout the tubers before planting. Aheat treatment of approx. +15-18°C will initialize sprouting. Eyes should be "open" before planting. To prevent the sprouts from becoming too long (risk of damage during planting), their growth in length can be slowed by cooling and/or supplying more light (16-18 hours a day).

Planting distances (row distance75cm):

-tuber diameter 8-35 mm: distance 24 cm, corresponds to 57.000 planting points/ha
(A good planter places 1,3 tons (t) potatoes of this size per ha, an inexact one about 1,5-1,6 t/ha)

-tuber diameter 35-55 mm: distance 28-30 cm; corresponds to 46.000 tubers/ha = 2,5 t/ha

-tuber diameter 55-62 mm: distance 32-34 cm; corresponds to 40.000 tubers/ha = 4,2 t/ha

Planting depth: The top surface of the seed tuber should be positioned even with the ground line (the ground line corresponds to the planar soil before hilling); or 2cm above the ground line if the hills remain sufficiently high throughout the entire season.

Fertilization

- without irrigation 180 kg N/ha
- irrigated up to 200 kg N/ha in two steps:
  2/3 between planting and hilling
  1/3 after emergence but before flowering
- K_2O 180-200 kg/ha preferably as potassium sulfate. If Potassium chloride is used the application 3 month before planting (50% of total) is recommended.
- P_2O_5 50-120 kg/ha depending on phosphorous content of soil
- MgO 50-60 kg/ha magnesium; depends on the soil content and the relationship of potassium/ magnesium in soil samples, (1:4 or 1:5 will be the best ratios)

If irrigation is available care should be taken to maintain moist soil conditions at the time of tuber formation.

Plant protection

Mechanical weed control may harm the micro roots. Modern herbicides are more effective. **PIROL** is not susceptible to the herbicide SENCOR (active substance: Metribuzin), if applied according to the recommendations given for this product. **PIROL** has a good resistance to late blight (Phytophthora). Nevertheless we recommend a full plant protection program in order to ensure maximum yield and quality. The first fungicide treatment serves mainly to control early blight (Alternaria) and should take place with 1.200 g/ha ***Mancozeb***, soon after emergence. This also provides some passive protection for the small plants against late blight (Phytophtora). Later, when the foliage is more developed, but before canopy closure, start the main treatment against Phytophthora. Since new races of rapidly acting Phytophthora are constantly developing, we highly recommend to apply systemic fungicides containing substances or mixed substances such as:

Metalaxyl-M, Fluazinam + Metalaxyl-M or Propamocarb + Thiopicolid.
Afterwards, alternate between various active ingredients, use for example:
Dimethomorph, Cymoxanil, Mandipropamid, Benthiavalicarb, Metiram, Propamocarb + Thiapicolide, Zoxamide or Chlorthalonil.
For the last treatment use antisporulative fungicides such as
SHIRLAN (Fluazinam), RANMAN (Cuazofamid) or GEMINI (Fenamidone).

Since the new races of this fungus often attack the stems first, it is important to ensure that the fungicides reach the stems. Therefore, the treatments should take place before canopy closure, using 400-600 l of water per ha during the spraying.Treatment intervals need to be closer when the plants develop rapidly. We also recommend a fungicide treatment after each rain. Since manganese is an essential micro nutrient, as well as a fungicide, we recommend every fungicide treatment to contain 1.200 g/ha ***Mancozeb*** per application event. This will aid in the manganese nutrition of the potato.

Harvest

PIROL has a fairly high dry matter content and should be harvested with care. The best time to harvest the tubers is when they have developed a properly set skin. This is approximately 2-3 weeks after maturation or defoliation. Start artificial defoliation only after the crop and leaves achieve 50% senescence. In many cases vines of the variety **PIROL** ripe by themselves so that no artificial defoliation is needed. In this event the yield is potentially higher and the potatoes contain lower sugar levels. The harvest should begin no later than 2-3 weeks after defoliation or ripeness. If the potatoes remain in the ground, the risk of soil borne diseases increases. Caution should be taken to avoid harvesting immediately following periods of excessive soil moisture. Open lenticels developed in these conditions can be a natural gateway for soil pathogens. This can have a negative impact on storeability.

Storage

Healthy and carefully harvested **PIROL** potatoes will store for a very long time without loosing their superior processing and frying qualities. Industrial chip factories demand **PIROL** in particular because of its excellent storing capability and the extreme low reducing sugar content, even after long term storage. For potato chip usage, optimal storage conditions are at 8°C, and the relative humidity can be raised to 95% for reducing pressure bruise. After the potatoes have been dried, the output of the fans should be reduced to 60 cubic metres of air per ton and hour.

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