

使用时生物利用率会显著升高^[17]。

5 展望

流行病学研究显示番茄红素在癌症、心血管病和老年性疾病等方面具有较好的预防效果,但作用机理还需要进一步深入研究。目前国外已有多家公司研制开发番茄红素的保健品。如以色列的 lycored Natural Products Industries Ltd.,该公司通过杂交育种选育出了一种番茄红素含量很高的番茄品种,并以此为原料生产商标为 LYC—O—MATO 的番茄提取物(Tomato extract)。现在番茄红素制品逐渐向生物制品方向发展,主要有防止紫外线伤,保护皮肤 LYC—O—MATO Sunscreen factor(Ultimate Pharma Products),澳大利亚 Korded Pty. Ltd 的 solar Health 和 Clear Complexin 等。用于预防前列腺癌的有:美国 Twinlab 公司的 Lycopene Postrate Protector,法国 Meta Pham 公司的 Duo—Confort 等产品。随着科学手段的提高和研究的深入开展,我们将更多的了解番茄红素的保健功效,其保健机制也会被更系统、全面的证实。

现在美国农业部(USDA)推荐的健康食谱中增多了富含抗氧化剂的水果和蔬菜,但其作用机制尚不十分清楚。将来的研究将主要集中在番茄红素的保健作用、对健康饮食和预防疾病的指导等方面。研究领域将包括血浆中番茄红素含量、生物利用率、长期的饮食控制研究、番茄红素的新陈代谢、异构化和它的生物学作用、同其它类胡萝卜素和抗氧化的相互作用以及预防疾病的机理等方面。

总之,番茄红素作为一种功能性天然色素,其在食品、保健和化妆工业等方面的应用前景广阔。

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薄皮甜瓜产生肚脐瓜、棱角瓜、扁平瓜的原因

贾 健,尹善发,李德泽,聂立琴

肚脐瓜 甜瓜果实花痕大并膨大凸出的果实,称肚脐瓜。肚脐瓜与品种特性有关,果肉薄、花痕大的品种较易出现肚脐瓜。开花较迟的雌花,花痕比较大,易产生肚脐瓜。植株生长旺盛,多肥、高温等因素肚脐瓜产生较多。

棱角瓜、扁平瓜 果实表面沿着心室部位出现棱角状的突起。横剖后可见到像南瓜那样的凹凸形状。坐果节位低,植株生长势弱,果实膨大前期得不到充足营养形成的扁形果,容易表现为棱角果。

原因 ①幼果生长初期在纵向未能充分发育。②植株营养生长弱,叶形小、叶面积不足,果实生长得不到充足的同化养分,果实生长受阻。③低节位所结果实,果实发育处于较低的温度,夏季栽培高温下易形成扁平果。

防治方法 ①调整栽培季节和改善设施栽培的温光条件,使果实发育处于正常的温度条件下。②控制结果节位,使在适宜节位坐果,保证果实发育期间得到充足的同化营养。③植株生长势差的可以推迟结果,必要时摘除低节位的幼果,其促进营养生长,尔后再促进结果。(黑龙江省齐齐哈尔市蔬菜研究所 161041)